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FOURTH ANNUAL REPORT

Preliminary Report

PROCEEDINGS

OF THE

TWENTY-SEVENTH ANNUAL MEETING

OF THE

OREGON STATE HORTICULTURAL SOCIETY

Held November, 20-22, 1912

PORTLAND, OREGON

Organized 1885

Incorporated 1909

STATE OF OREGON
1859

SALEM, OREGON
WILLIS S. DUNIWAY, STATE PRINTER
1913

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SALEM, OREGON
WILLIS S. DUNIWAY, STATE PRINTER
1913

THE officers of the Society have been at work during 1912 securing data on foreign shipments, with special reference to canned and dried fruits, preserves and other by-products, and this information will be printed in a supplemental report as soon as it can be collected and prepared. Hon. H. B. Miller has taken this matter up with Foreign Consuls, and much correspondence has already been secured, which will prove of interest to the fruit grower.

FRANK W. POWER, Secretary.

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Oregon State Horticultural Society

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Chas. A. Park, Salem, three years.

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W. H. Lawrence, Hood River

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Marvin, W. H., Albany
Moyo, J. W., Lyons
Meserve, Chas. Medford
Miller, A. F., Sellwood
Miller, E., Eugene
Miller, F. W., Eugene
Milliron, A. C., Sandy
Mixter, W. B., McMinnville
Mohr, J. H., Hood River
Mohr, Peter, Hood River
Mohan, P. H., Hood River
Montgomery, G. M., Corvallis
Mt. Hood Land Co., Chamber of Commerce, Portland
Mudge, C. T., Sheridan
Mueller, Jno., Rex
Murphy, J. E., Salem
National Lead Co., 840 Merchants Exchange Bldg., San Francisco, Cal.
Naumes, J. P., Hood River
Nelson, R. H., Independence
Newell, A. C., Clackamas
Nielson, A. C., Junction
Nishizaki, S., Corvallis, O. A. C.
O'Hara, Eugene, 180 Front, Portland
Orchard Ladder Mfg. Co., McDonald Bldg., St. John
Oregon Box Mfg. Co., 1326 Macadam Road, Portland
Overholtzer, J. M., Sherwood
Palmer, L. L., Willamina
Palmer, W. G., Hood River
Parberry, J. L., Milwaukie
Parker, Geo. G., Grants Pass
Parvin, Chester A., Portland
Parvin, J. R., Marquam
Patterson, J. W., Corvallis
Patterson, W. J., Box 222, Portland
Paul, E. V., Sheridan
Pearcy, C. K., Corvallis
Perkins, Edwd. J., Portland; Vancouver, Washington
Perrin, C. C., 205 Washington St., Portland
Phillips, C. L., The Dalles
Phillips, S. W., Grants Pass
Piper, E. S., 450 Magnolia, Portland
Plummer, O. P. S., 260 3rd St., Portland

Pooler, E. R., Hood River
Portland Realty Board, Henry Bldg., care J. Fred Larsen
Power, C. E., Portland
Pulford, S. D., Myrtle Point
Rahles, A. W., Hood River
Rand, M. V., Hood River
Reed, Chas. W., Hood River
Rees, R. W., Amherst, Mass.
Reimers, Capt. Paul, Corbett Bldg., Portland
Riese, H. H., 508 Jefferson St., Portland
Riddle, C. M., LaGrande
Ritt, Wm. F., 508 Jefferson, Portland
Robbins, E. C., 3rd and Morrison St., N. P. R. R., Portland
Roberts, C. T., Route 1, Hood River
Robinson, David, Mosier
Rogers, Adeline F., Forest Grove
Rogers, Geo. K., 1027 Board of Trade, Portland
Rueter, Ernest A., Forest Grove
Rumbaugh, D. W., Albany
Ryslogle, J. E., 725 Prospect Drive, Portland
Sargent, H. K., Chamber of Commerce, Portland
Saunders, Sam'l, Newbridge
Schartow, C. H., Ridgefield, Wash.
Schultz, C. E., Corvallis
Sealy, Francis, Stark St., Portland
Sedgwick, C. H., Creswell
Seelye, B. A., Eugene
Shepard, J. R., Roosevelt, Wash.
Sheppard, Geo., Hood River
Sherman, Wm. E., Hood River
Shogren, F. A., Mosier
Sieverkropp, H. F. J., Hood River
Smith, E. D., Delayan, N. Y.
Sonneman, L. C., Route 1, Hood River
Sprague, A. P., Route 2, Box 24, Hood River
Standish, P. F., Estacada
Starrett, Wm. R., Portland Hotel, Portland
Starrett, Mrs., Portland Hotel, Portland
Steele, S. N., Lewis Bldg., Portland
Stewart, Fred S., 410 Corbett Bldg., Portland
Stinger, C. W., O. R. & N. Co, 3rd St., Portland
Stone, N. B., 81 Winchell St., Portland
Struckmeyer, Henry, Thomas
Stuart, J. C., Portland
Swetland, L. Q., Portland
Swett, W. H., 144 E. 7th St., Portland
Tarbell, G. L., Yankton
Taylor, F. H., Route 3, Hood River
The Dalles Business Men's League, The Dalles
Thomas, A. B., Forest Grove
Thomison, J. D., Hood River
Thramer, Jno., Eugene
Tillinghast, E. S., Salem
Townsend, Henry A., 615 Henry Bldg., Portland
Tufts, G. L., 1567 Leroy Ave., Berkeley, Cal.
Turner, W. S., Electric Bldg., Portland
Twight, Prof. E. H., Tonasket, Wash.
Ueland, L. A., Roseburg
Upshaw, W. E., Tigard
Van Dorn, D. C., Dayton
Van Voorhis, B. E., care Portland Flouring Mills, Portland
Vercler, Andrew, Salem
Wahlberg, Harold, 303 Chamber of Commerce, Portland
Waite, F. L., Eugene
Walter, O. L., Route 1, Hood River
Warner, F. D., 101 Tremont St., Boston, Mass.
Warren, Chas. A., Route 1, Vancouver, Washington
Webster, C. H., The Dalles
Weeks, Geo. W., Salem
Welch, C. H., 174 71st, Portland
Welch, R. M., Sheridan
Welty, Dr. Emma J., 321 Montgomery St., Portland
Whaley, C. F., Hanford, Washington
Whealdon, Lambert, Shedd
Whitby, Harold, Corvallis
Whitby, Harris, Corvallis
White, Harry E., Route 5, Box 38, Salem
Whitemore, C. A., care Irwin-Hodson Co., Portland
Wickham, J., Hood River
Williams, E. E., 420 Lincoln Drive, Philadelphia, Pa.
Wilson, Geo. W., 405 Gerlinger Bldg., Portland
Wilson, Joseph, Hood River
Winchell, V., Hood River
Winstanley, Jas., Salem
Withycombe, Thos, 421 Hamilton Bldg., Portland
Wonnacott, C. N., Portland, Y. M. C. A.
Westerlund, J. A., Life Member.

AMENDED ARTICLES OF INCORPORATION
OF THE
OREGON HORTICULTURAL SOCIETY

Know all Men by These Presents: That we, the undersigned, Homer C. Atwell, of the county of Washington, Frank W. Power, of the county of Multnomah, and James R. Shephard, of the county of Polk, all in the State of Oregon, being officers of the Oregon State Horticultural Society, unincorporated, and having been duly elected to the respective offices hereinafter specified, in accordance with the usages and regulations of said society, do hereby associate ourselves together for the purpose of incorporation, under and by virtue of the general corporation laws of the State of Oregon, relative to religious, literary, benevolent, charitable and similar societies; and we do make, subscribe and adopt, in triplicate, these articles of incorporation, to wit:

1. The name assumed by this corporation, and by which name it shall be known, is Oregon State Horticultural Society; and its duration shall be unlimited.

2. The object, business and pursuit of this corporation is, and shall be as follows: (1) The development of agriculture and especially of those branches known as horticulture, floriculture, arboriculture, and forestry; (2) the development of landscape gardening, and of all arts, sciences and instrumentalities likely to elevate the chararter of the rural population, and increase the profits, comforts and pleasures of rural life; (3) the collection, preservation and dissemination of knowledge relative to the foregoing and other kindred subjects; (4) the exploitation and development of all agencies tending to conserve the natural resources of the country, and to arouse the public to an interest in such conservations; (5) to acquire, own, hold, use, sell, and otherwise dispose of and convey real and personal property; to accept, receive, and use gifts, devises, legacies, bequests, and legislative appropriations; to borriw money, and execute therefor its promissory notes, mortgages, and other assurances; (6) to do any and all other acts and things which may be necessary, advisable or convenient, for the purpose of more effectually accomplishing the purposes aforesaid, or any of them.

3. The estimated value of the property and money possessed by said society at this time is one hundred dollars; and the sources of its revenue or income is, and will be, dues of its members, subscriptions, donations, devises, legacies, bequests and legislative appropriations, and any income which may be derived from the investment or use of any moneys or property so acquired.

4. The respective titles of the officers making these articles are as follows: Homer C. Atwell, president; Frank W. Power, secretary-treasurer, and James R. Shepard, vice-president. They shall hold their respective offices until their successors therein shall be duly elected and qualified. Their successors in office shall be elected by a majority vote of the members of said Oregon State Horticultural Society who are in good standing and present, and voting, at an annual meeting of said society on the first Tuesday of December, 1909; and on such other day and month

of each succeeding year thereafter as may be designated in the By-Laws of said society as the date of its annual meeting, said annual meetings to be held in the city of Portland, Oregon.

5. The location of said society shall be in said city of Portland, in the county of Multnomah, and State of Oregon.

"Section 6. The management of the affairs of the society shall be vested in the President, Vice-President and Secretary-Treasurer, and three Trustees. They shall be elected at the annual meeting each year, which shall be held at such time as may from time to time be fixed by the By-laws. The officers and trustees shall hold office for such time as provided from time to time in the by-laws."

Signed in triplicate and sealed with the seal of the society this 15th day of October, 1912.

A. P. BATEHAM,
President.

E. H. SHEPHARD,
Vice-President.

FRANK W. POWER,
Secretary-Treasurer.

Acknowledged before notary public.

AMENDED BY-LAWS

OF THE

OREGON STATE HORTICULTURAL SOCIETY

(Adopted November 20, 1912.)

ARTICLE I.

THE SOCIETY YEAR.

The society year shall begin on the first day of January.

ARTICLE II.

MEMBERSHIP.

Section 1. The membership of the society shall consist of annual, life and honorary members.

Section 2. Any person who shall pay the annual membership fee of one dollar shall thereby become a member for the current year, ending with the opening of the next annual meeting.

Section 3 Any person who shall pay the life membership fee of ten dollars shall thereby become a life member and shall be excused from further payment of membership fees.

Section 4. Any person who in the opinion of the society has done the society or horticulture in general some especially valuable service, may be elected to honorary membership by a two-thirds vote of the members present at any regular meeting and shall be excused from payment of all membership fees.

Section 5. Those who were honorary members, before the incorporation of this society, shall continue to be considered honorary members, without further action of the society.

Section 6. All members shall be entitled to the same rights and privileges.

ARTICLE III.

OFFICERS.

Section 1. The officers of this society shall be a President, a Vice-President, and a Secretary-Treasurer and three Trustees. The last four shall be under bond in such sum as the society may designate, for the faithful discharge of his duties.

Section 2. The president and secretary shall be ex-officio members of all committees, except the auditing committee.

Section 3. The duties of said officers shall be such as usually devolve upon like officers, in similar organizations; provided, that no bills shall be paid without the approval in writing of the president and secretary; and provided further, that a committee of three, to be chosen annually by the society, shall audit all bills, reports and accounts, and render a report thereon to the society.

Section 4. The secretary shall, at each annual meeting, render a report showing:

First—The personal property of the society in his hands.

Second—The irreducible funds, securities and bills receivable belonging to the society, stating how such funds are invested, and the interest then accrued on the same and on the other securities and bills receivable. Said report shall cover all documents of permanent value or use.

Third—He each year shall render to the auditing committee a complete report of the cash receipts and disbursements for the preceding year, and this report together with the report of the auditing committee shall be made a part of the proceedings and printed in the annual report.

Fourth—The premiums offered, and by whom offered, and what was the final disposition of same.

Section 5. The three trustees appointed by the Governor as a Board of Control of the State appropriation, together with the president and secretary of the society, shall constitute an executive committee, which committee shall be empowered to transact any and all business of the society that may be necessary between meetings of this society.

The executive commmittee shall from time to time fix the compensation of the secretary of this society as they may deem the requirements of the office may justify.

ARTICLE IV.

DATE OF ANNUAL MEETING.

The annual meeting shall be held on such days in November or December of each year as the officers may, from year to year, designate. The officers shall be elected on the afternoon of the second day of the annual meeting. The president, vice-president, and secretary-treasurer shall take charge of their office on the first day of January next following their election and hold office for one year, or until their successors are elected and qualified.

The trustees shall be chosen in accordance with the act of the Legislature so long as an appropriation is given by the State, and unless otherwise provided therein shall hold office for three years. In case the Legislature shall fail to grant an appropriation in any year, the trustees shall be elected for three years by the society.

ARTICLE V.

OTHER MEETINGS.

Section 1. Other meetings may be held at such times and places as the society by vote at a previous meeting may designate.

Section 2. The president may call a special meeting at Portland, by causing notice thereof to be mailed to each member at least five days previous thereto, such notice to state the object of such meeting.

Section 3. It shall be the duty of the president to call a special meeting whenever requested in writing so to do by fifteen or more members.

ARTICLE VI.

PUBLICATIONS.

Every member shall be entitled, without cost, to one copy of all official reports published by the society.

ARTICLE VII.

QUORUM.

Nine members shall constitute a quorum for the transaction of business, but a less number may meet, call to order, and adjourn from time to time.

ARTICLE VIII.

ORDER OF BUSINESS.

The following order shall be observed as a guide in the transaction of business at the annual meeting of the society:

1. Call to order and reading of minutes of previous meeting.
2. Reports of officers.
3. Reports of committees.
4. Unfinished business.
5. New business.
6. Election of officers.
7. Papers, addresses, etc.

ARTICLE IX.

RULES OF PRACTICE.

Robert's Rules of Order shall govern the deliberations of the society.

ARTICLE X.

IRREDUCIBLE FUND.

All life membership fees, together with the sum of $2,000 of the amount heretofore realized from the bequest of the late Cyrus E. Hoskins, the "Lambert Fund," and the "Cardwell Fund," shall be kept in tact and invested on good security, so as to produce a revenue, if possible and only said revenue shall be expended by the society.

ARTICLE XI.

PERSONAL PROPERTY.

The secretary shall be the custodian of all badges, banners, dies, medals, blanks, books and other property of the society of value or suitable for future use; and shall exact from his successor an itemized receipt for said property, when same is transferred.

ARTICLE XII.

RECORD OF REPORTS.

The annual reports of the officers, and of the auditing committee and all reports relative to the finances or, property of the society, or the disbursements of its funds, shall appear in full in the record of transactions, in the order of their filing with the secretary following the record of the meetings at which the reports were presented. The treasurer's report shall be made to the auditing committee showing a full report of receipts and disbursements and said report together with report of the auditing committee shall be made a part of the proceedings.

Said reports may either be pasted upon said record, or copied, in which latter case the copy shall be attested by the secretary.

ARTICLE XIII.

The executive committee may, if they deem it advisable, lend the assistance of the society in any display of fruits and products of the state.

ARTICLE XIV.

AMENDMENTS.

New by-laws may be adopted and old ones changed or repealed by a two-thirds vote of the members present at any meeting; provided, notice of such proposed adoption, change or repeal shall have been given at the last previous meeting of the society; and provided further, that a vote to change or repeal Article X shall be by yeas and nays, recorded on the record book of the society. Said vote shall be taken only at an annual meeting, and after due notice given at the annual meeting next preceding the same.

OREGON STATE HORTICULTURAL SOCIETY

TREASURER'S REPORT

Below find treasurer's report for year 1912 up to and including May 1, 1913.

STATE FUNDS

To balance on hand last report	$3,400 73

Date	Warrants drawn	No.	Amount
1912			
April 17	Hicks-Chatten Eng. Co., cuts for report	16	$ 34 70
Aug. 15	Pacific Paper Co. paper for reports, 1912	17	91 80
Aug. 20	Rodgers Paper Co. binding reports, 1912	18	28 90
Sept. 11	Stamps, mailing reports, Frank W. Power	19	50 00
Oct. 29	Postal cards for notices of meeting, B. A. Mitchell	20	2 00
Nov. 20	State Printer, letter heads, receipts, envelopes, 2,000 reports, etc.	21	313 26
Dec. 2	B. A. Mitchell, P. M., stamped envelopes	22	42 72
Nov. 7	Rodgers Paper Co. perforating and binding receipts	23	1 50
Dec. 8	Merchants Nat'l Bank, premiums at Pacific Land Products Show	24	2,000 00
Dec. 2	Miss M. Drummond, stenographic work annual meeting	25	62 00
Apr. 4, '11	Anderson & Duniway Co. binding reports, 1911, voucher not received until December, 1912	26	7 50
Dec. 19	J. K. Gill Co. loose leaf binder for members	27	3 20
Dec. 27	B. A. Mitchell, P. M., stamps	28	230 00
Dec. 18	A. P. Bateham, stamped envelopes for president	29	21 36
1913			
Mar. 14	State Printer, letter heads, envelopes, notices	30	8 00
Mar. 15, '11	500 No. 12 envelopes, warrant presented April, 1913	31	1 80
			$2,898 74
	Balance on hand for printing report 1912		501 99
			$3,400 73

IRREDUCIBLE FUNDS

Hoskin Fund	$ 2,000 00	
Lambert Fund	100 00	
Cardwell Fund	208 50	
Life membership	515 00	
		$ 2,823 50
Above invested as follows:		
Mortgage, W. K. Newell, 6 per cent, two years to run	$ 2,300 00	
Note, J. R. Cardwell, 6 per cent	50 00	
Ladd & Tilton Savings Bank 3½ per cent	473 50	
		$ 2,823 50

GENERAL FUND

RECEIPTS

On hand last report, 1911	$ 999 11	
Membership, 1912	2 00	
Membership, 1913	205 50	
(Paid out to P. L. show $24, balance $183.50)		
Stamps bought for P. L. P. show	1 60	
State funds received for stamps bought	52 00	
Interest received of W. K. Newell	138 00	
Lafean Box Bill committee returned from $200 received	96 85	
		$ 1,495 06

DISBURSEMENTS

Stamps sent for membership	$	1 50		
State funds advanced for stamps Afterwards refunded by state		52 00		
Mailing tubes		2 00		
Pacific N. W. Land Products show, 50c allowed from season ticket for show and $1 for society on 48 members		24 00		
Lafean Box Bill committee, advanced to be refunded from donations Advanced $200, returned $96.85, loss $103.15		200 00		
Printing and stationery		10 55		
Salary, office rent, local telephones and stenographic work for the year		300 00		
Expenses, sundry		175 58		
Balance in Ladd & Tilton Bank			$	729 48
In addition there is in the savings department belonging to the general fund, interest				7 09
Total available in general fund			$	736 57

In addition to the amount shown in the Irreducible Cardwell Fund there is a pledge of $10 by E. H. Shepard which will be paid in this year.

Respectfully submitted,
FRANK W. POWER,
Secretary-Treasurer.

We, your committee to audit the accounts of the secretary-treasurer of the Oregon State Horticultural Society, beg leave to report that we have carefully audited the books and accounts and find them correct as reported.

ALBERT BROWNELL,
C. D. MINTON,
Auditing Committee.

REPORT

OF THE

TWENTY-SEVENTH ANNUAL MEETING

OF THE

OREGON STATE HORTICULTURAL SOCIETY, PORTLAND, OREGON

November 20-22, 1912.

Session of Wednesday morning, November 20th, convened at ten o'clock, presided over by Mr. A. P. Bateham, President.

Dr. J. R. Cardwell, Honorary President, was invited to a seat at the table.

Reading of the minutes of the last annual meeting was dispensed with, as they had been printed in the annual report.

The minutes of a special meeting held on November 14th were read and approved.

Reports of officers being next in order, President Bateham said:

"I must ask your indulgence for not having prepared a formal address. Probably some of you can guess why, but the simple fact is that the unexpected stress during the last few weeks, incident to the opening of the Land Products Show, prevented the preparation of such a survey of the horticultural horizon as I would like to present to you, but there are two or three topics that I desire to touch on, that I consider of prime importance.

"I think that the Horticultural Society should be broad enough to invite and welcome all farmers, whether fruit farmers or not, to its membership.

"The incorporation charter of the society provides that it is for the development of agriculture, especially horticulture, gardening, etc. It is chartered right, but practically we have been considering ourselves as fruit growers only and have kept too close to the narrowest lines of horticulture. The agricultural interests have no State society or organization in which they can meet or express themselves or take any united action, unless the State Grange might be so considered, which hardly covers the point.

"It is noticeable among the exhibitors and visitors at the Land Products Show, that they keenly feel the lack of such an opportunity for expression and action.

"I make the suggestion that, by resolution or otherwise, this society might arrange at next year's meeting, to have a full week of meetings with some days for horticultural discussions and some for agricultural topics, making a united society of all the membership which should include all tillers of the soil.

"None of us, speaking particularly as horticulturists, confine ourselves to that branch of agriculture alone, or, if we do now, we will not for very much longer, for we are working more and more into diversified farming.

"We are all interested in all phases of farming even if some care less for fruit and some less for grain. I believe we can combine the two and make a strong combination.

"Another topic which will come up in the meeting and to which I urge your special attention, is the matter of horticultural laws.

"I am not entering into any argument at all, but it is impossible for you not to recognize that there has been and is a great deal of complaint, whether right or wrong, touching the efficiency of the horticultural inspection laws and service and it goes without saying, that we all desire efficiency.

"Recognizing that, I invited, or appointed a committee to look into the subject and make a report which they will do during the meeting.

"A few words about the big Land Products Show across the street might be proper at this time:

"It is something of an innovation since the last meeting of the society. At that time I was authorized to appoint a committee or directors of Portland men to arrange for and manage an apple or fruit show. I have forgotten which word it was, but it was found expedient to make it what you see it is, a show of diversified farm products. The apple show that you wished is there, and a great deal more. I wish to state that an absolute necessity arose to broaden it out for there could not have been an exclusive fruit show organized and held in the State successfully, whereas it was possible to put on a varied products show.

"This show was designed as a huge demonstration of the rich possibilities that exist for those who adopt farm life and choose wisely the class of products that their environment is suited for. Fruit growing has been perhaps unduly advertised to the exclusion of other features with the result that thousands of acres of land that could return good profits on crops of hay, grain, etc., has been withdrawn from such use and planted to fruit with a more than doubtful prospect of profits because the product will be of such a mediocre grade that it will inevitably reduce the average grade of products of the orchards of the Northwest. The fruit industry should protect itself from such destructive competition by assisting to divert the use of land to its most suitable crops.

"The most expert and successful producers of the Pacific Northwest are in attendance at the show with samples of their products and a willingness to tell the details of their successes. Many of the Faculty of the Oregon Agricultural College with their assistants are spending the entire week here with an extensive and wonderfully instructive exhibit, affording information to thousands of interested inquirers.

"The display of apples from four states, with a wide distribution of prizes, is a useful object lesson to each of the fruit districts, that they are all fairly in the game and that none can be overlooked, but all must unite when it comes to considering ways and means to established the industry on a sound business basis. The marketing question is probably right at the top of the minds of most of you and the topic will come up in various papers and discussion during the meeting."

Mr. Power, the secretary, then reported as follows:

"Mr. President and Members of the Society:

"I am somewhat in the same position as Mr. Bateham. I have not prepared a formal report. In fact, my report always comes in the printed proceedings of the Society."

(Here Mr. Power discussed at length the amounts that had come into the treasury from the different beneficiary funds.)

"When the Lafean Box Bill Committee was appointed it was supposed to raise funds among the various fruit growers' organizations, to pay expenses of the committee, but we sent a man back East, C. E. Whisler. The fruit growers' associations did not come through as promised with funds, and I advanced $200 of the society's funds to the secretary of that committee, C. A. Malboeuf. That money has not been repaid as promised, and I understand there is now about $95.00 in that fund. The balance is a deficiency, and that matter will have to be adjusted at this meeting. I had no authority whatever, to advance this money, but as the fruit growers' associations did not come through as promised on the funds, there seemed to be no other course open. The Apple Show has been directly under the auspices of the society and gave us an increased membership as well as a profit. This year we will have to depend on our own resources to get members. We would like to have every fruit grower join the society. I have been criticised in the past by several of the members of the society for allowing vegetables to be exhibited at the Apple Show, but I am glad to say that my position in this matter has been ratified by the society and that it does not hurt the Apple Show to have other products of the soil exhibited.

"I want to see a number of the members here join the American Pomological Society. It only costs $2.00 per year, or $20.00 for a life membership. E. R. Lake, our former secretary, is now secretary of that society."

(Reads letter from Mr. Lake.)

"My complete report will be published in the Society as usual.

"The officers of the Society were appointed a committee to reincorporate the Society, and prepare by-laws in harmony therewith. We have done so. The Articles have been filed with the Secretary of State and also with the county clerk of Multnomah County. The amended articles were read at the special meeting. The only change in the articles was in making the three trustees officers of the Society, which was ordered at the last meeting, and they are now genuine officers of the Society. The amended by-laws as presented at that special meeting I hold in my hand.

"The changes proposed in the by-laws are two; one is making the trustees officers of the Society; the second is in the date of the expiration of the term of office of the officers. That is, the president and secretary retiring from office are given until December 31st to close up their business. It is very embarrassing for a new secretary to close up the business that was started by someone else, and it was deemed desirable to make that change.

"There is one point in the by-laws that should be attended to now. It is suggested that the business meeting of the society be had on the afternoon of the second day in place of the forenoon of the first day"

Mr. Bateham: "If there are no other reports of committees at this time, we will take up the matter of the by-laws.

"The secretary will read the proposed by-laws, of which notice was given at the last meeting. Mr. Secretary, read the by-laws as they stand, without comment, and then afterwards if you will please explain where there has been a change. These are complete by-laws substituted for the old by-laws, and there are a few changes which you will please explain after you have read them."

Mr. Power: (Reads amended by-laws.)

"These are the by-laws that were recommended at the special meeting. Now, if you wish, I can read the changes and leave out the sections where there is absolutely no change, or I can read them section by section just as I did—just as you wish."

Mr. Bateham: "The changes are good enough."

Mr. Power: (Here Mr. Power read the change in Article I, changing the date of newly elected officers taking office to the 1st of January.)

Mr. Bateham: "All in favor of the adoption of this article signify by saying 'Yes'. Those not in favor by 'No'.

"The motion was unanimously carried."

Mr. Power: "Article II on membership is just exactly the same. Adopted."

"Article III, officers in the old by-laws. The officers of this Society shall be the President, the Vice-President, and Secretary-Treasurer. The change is, to have the President, Vice-President, and Secretary-Treasurer and three trustees as officers. Adding the three trustees is the change that is made."

"The last four, that is the Secretary-Treasurer and the three trustees, shall be under bonds. Adopted as read."

(Reads Article III, Section 5.) "There was a legal question as to whether the trustees could do that, now they can legally do it. Section 3 adopted."

"The date of the annual meeting, Article IV. The change being that the officers take charge of their duties on the first day of January instead of immediately upon election, and also making provision that if the State does not make an appropriation we have a way of electing our trustees. The amendment was unanimously adopted."

It was here decided to strike out the word "three days" making it read "such days" for the annual meeting.

Article X was read.

This covers into the irreducible fund, the Cardwell Fund"; the "Hoskin Fund"; the "Lambert Fund", and the Life Membership fund. Same was unanimously adopted.

It was thereupon moved and seconded that the entire group of by-laws be adopted as read and amended. Motion was unanimously carried.

Mr. Ray H. Roberts: "The committee on horticultural laws is not ready to report at this time. They wish to gather more data and figures, and would like to report later."

Mr. M. O. Nelson of the committee on Shade Trees said:

"I am a member of the special committee to prepare a bill for the appointment of tree wardens. Superintendent Mische of the City Park has that bill in hand, and if he is not here this morning, he will make a report probably this afternoon. If he does not, I will bring the bill."

The secretary announced that an invitation has been extended to the members of this Society to take luncheon today with the "Ad Club" at the Multnomah Hotel. They meet every week. Some time ago they took for today the topic "Advertising the Apple". They have arranged for speakers on that subject. The luncheon commences at 12:15 sharp and will not extend beyond 1:30.

On motion of H. E. Weed it was decided to go in a body to the Multnomah Hotel.

Dr. Cardwell, the Honorary President of the Society was then invited to preside and he introduced V. R. Gardner, an associate professor of pomology at the Oregon Agricultural College who presented a paper on—

"WALNUT GROWING IN THE NORTHWEST AS A BUSINESS."

Prof. V. R. Gardner, Oregon Agricultural College.

Introduction.

Much has been said and written regarding nut culture in the Northwest. Discussion, however, has been limited largely to questions of the relative merits of different soils, elevations, exposures, varieties, methods of propagation and the advantages and disadvantages of different cultural practices. Little serious attention has been given to questions pertaining to the business side of nut growing. When it is asked how much land suitable for nut growing costs, how much it costs per acre to plant and develop a nut orchard, how long it is before paying crops are gathered and what yields and prices may be expected on the average, satisfactory answers are not forthcoming. The few answers that are given are usually very indefinite. While there are many questions pertaining to the various details of cultural practice that are yet to be decided, general methods of procedure are pretty well agreed upon and it is time that a certain amount of attention be given to a consideration of nut growing as an occupation.

The First Investment—What it Costs to Get Started.

One of the first general questions that the prospective nut grower asks is how much does it cost to get started; and the first specific question is "what is it necessary to pay for land suitable for nut growing?" This is always a difficult question to answer for not only do land prices vary widely in different parts of the northwest, but they often fluctuate considerably from time to time. It often happens that a particular piece of land in one section is priced at $150 per acre, whereas equally good land a short distance away may be bought for from $90 to $100 per acre. In general it may be stated that land suitable for walnut growing can be obtained for about $100 per acre. Much that is adapted to the walnut is priced higher than this but it may well be asked whether or not the prospective nut grower should pay much more. Even though he can pay $150 or $200 per acre for it and still make interest upon the money invested when the nut orchard is in bearing he will find himself handicapped along side of the man who obtains equally good land for $100 per acre or less. No one is to be encouraged to buy land for nut growing simply because it is cheap. Poor land is likely to prove dear at any price; but the importance of keeping down the amount of the original investment is too often lost sight of. The novice may think that a difference in price of $75 per acre is a rather small matter, that $5 added income per acre per year will more than pay interest upon that extra investment. Such is not the case, however, for a difference of $75 per acre in cost of land amounts to about $120 per acre at the end of 8 years when the orchard is about ready to bring in returns.

Equipment.

After buying the land the next thing is to equip it. The equipment required for a 50 acre nut orchard will include a good team, harnesses, wagons, plows, hoes, cultivators, shovels, etc., and a barn with room sufficient for housing both stock and tools. The team will probably cost about $400; harnesses may be estimated at $100; wagons, plows, shovels, and other tools at $250; and a barn sufficient to meet the actual needs of a 50 acre nut orchard may probably be built for $500. This makes a total cost of equipment of $1250. If this equipment accommodates 50 acres, the cost of equipment per acre is $25.

Attention may here be called to the fact that propably this same amount of equipment is required to supply a 40 or 25 or 10 acre unit, for the owners of even the smallest of these units must have a team and practically the same tools required by the larger orchard, and barn and storage room is as essential in the one case as the other. This means that, within certain limits at least, the smaller the unit the greater the cost of equipment per acre. The relation of this factor to profits will be pointed out later.

Planting.

Plowing and harrowing the ground and getting it in condition to plant will cost about $4 per acre. Assuming that trees are set 45 feet apart each way and that they cost about $150 per hundred, cost of nursery stock amounts to $30. To some this may seem abnormally high but only the best of grafted trees are to be recommended and these will not average less than $1.50 per tree. At this point it may not be entirely out of place to mention that the difference in price between grarfted and seedling stock is really a trifling matter when compared with the amount that is being invested in the nut orchard anyway and that even a difference in yield of one pound per tree in later years more than pays interest on the extra investment. If the yields were the same from the two kinds of stock and there proved to be a difference of one-half cent per pound wholesale, about 20 per cent per year would be realized from the extra investment. Staking the ground and planting will cost about $1.00 per acre. Cultivation the first season will probably cost about $2.00 and interest for one year on the first investment of $160 for land, equipment and nursery stock will amount to $9.60. This makes the cost of the nut grove up to the end of the first year $171.60.

Bringing the Orchard Into Bearing.

Fortunately the nut orchard while it is being brought into bearing does not require much in the way of special care and attention. If $6.00 per acre per year is allowed for cultivation, $1.00 for staking and pruning and $3.00 for taxes and general upkeep, the total of

$10.00 will probably be found to cover all necessary expenses. Interest at 6 per cent on $171.60 for one year amounts to $10.30. This and the $10.00 running expenses for the second season makes a total of $191.90, the cost of the nut, orchard up to the end of the second year. Assuming the same rate of interest upon the money invested, and the same annual cost of maintenance, the investment represented at the end of the third year is $213.41, at the end of the fourth year $236.21, at the end of the fifth year $260.38, at the end of the sixth year $286.00, at the end of the seventh year $313.16 and at the end of the eighth year $341.95. It is recognized that these figures are arbitrary and that under some circumstances costs might be higher and under others somewhat lower. It is believed, however, that they represent approximately the prices that will actually have to be paid under average conditions to develop a nut orchard. Eight years is assumed as the age at which the nut orchard will begin to bear. With certain varieties and in certain locations this may be too early; with other varieties and in other locations returns will be obtained two or three years earlier.

Yields.

It is very difficult to obtain from growers sataisfactory estimates of the yields of nut orchards of different ages. Too often the estimates given for commercial plantings are based upon the yields of isolated trees occupying specially favorable conditions and do not represent what may be expected on the average from large acreage. Probably 10 pounds is a fair estimate for the average annual yield of trees 9 to 12 years old. This is the equivalent of 200 pounds to the acre. Twenty pounds per tree, or 400 pounds per acre, is probably not far from what may be expected on the average from trees 13 to 20 years old. Fifty pounds per tree or one-half ton per acre is a fair estimate for old orchards. Many will object to these figures as being too low, illustrations being afforded of single trees 25 or 30 years old that some years bear 200 or 300 pounds or that even average 100 or 150 pounds season after season. It will be found, however, that nut growers having large plantations are very well satisfied when they secure an average of one-half ton per acre from their entire acreage of trees over 20 years old.

Prices.

The prices obtained for nuts fluctuate from season to season and from month to month within the season just as the prices of other fruits, though perhaps they are subject to a little less variation than those of some of the more perishable fruits. Fourteen cents per pound may be regarded as a fair average price year in and year out. Cost of harvesting and shelling the nuts will amount to about 3 cents per pound. This leaves 11 cents per pound to cover cost of growing and interest on the investment.

Returns.

Two hundred pounds per acre at 11 cents, the wholesale price less the cost of harvesting and shelliing, amounts to $22.00, the returns that may be expected on the average from trees 9 to 12 years old. Four hundred pounds per acre at 11 cents amounts to $44.00 the returns that may probably be expected on the average from orchards 13 to 20 years old. One thousand pounds per acre at the same price amounts to $110, the figure that may probably be expected on the average from orchards more than 20 years old. Deducting from each of these amounts $10.00, which we found to be the cost of production per acre, leaves $12.00, $34.00, and $100 as the average net returns per year from orchards 9, 12, 13, 20, and more than 20 years of age, respectively. Twelve dollars net per acre per year hardly pays interest at 6 per cent upon the money which has been invested in the nut orchard. In other words the nut orchard is just about self supporting during this period. Thirty-four dollars per year during the 13 to 20 year period represents about 10 per cent upon the $341.95 investment. An annual net return of $100 per acre is the equivalent of about 32 per cent on the original investment. This, of course, is a very high rate of interest but it is believed that it does not overestimate the profits that well cared for orchards growing under favorable conditions may be expected to return. The investment is thus seen to be a long term one, but profitable in the end.

Income—The Profitable Unit.

A 50 acre orchard paying an annual dividend of $22.00 per acre during the 9 to 12 year period affords a gross annual income of $1,100; during the 13 to 20 year period with the price and yields assumed an income of $2,200; and after that an annual income of $5,500. It is thus seen that a 50 acre walnut orchard not only affords a good rate of interest upon what has been invested in it but it yields a reasonable income after it is 12 or 13 years old and a very good income as it becomes older.

From these figures it should not be reasoned, however, that 25 acres will afford as high a rate of interest and be as desirable an investment as the 50 acre unit. Attention has already been called to the fact that in all probability the same amount of money will have to be expended for barn, tools, live stock, etc., to equip a 25 as a 50-acre nut farm. Twelve hundred and fifty dollars in equipment for 25 acres amounts to $50 per acre, $25 more than must be charged up to the land in the case of the 50-acre unit. Twenty-five dollars at 6 per cent and compounded annually amounts to $35.85 at the end of 8 years. This makes the actual investment per acre of a 25 acre walnut orchard $381.80 instead of $341.95. On this basis the orchard will be operated at a loss during the 9 to 12 years period, assuming the same yields and prices as before. The $22.00 that would be received for the crop after deducting the cost of harvesting and shelling, less the $10.00 per acre required for production, would not pay interest upon the $381.80 invested. In fact, even during the 13 to 20 year period with an average yield of 400 pounds and a net income of $34.00 after cost of production and harvesting is deducted, interest on the amount invested is only about 9 per cent. After 20 years, however, with an annual yield of one-half ton per acre and the net income increased to $100 the interest would amount to about 21 per cent upon the investment.

Similarly of 10 acres instead of 25 or 50 acres constitutes the unit, the $1,250 in equipment means a charge of $125 against each acre of land. This is $100 more than when the same equipment supplied 50 acres. One hundred dollars at 6 per cent and compounded annually amounts to $159.38 in 8 years. This makes the investment $501.33 per acre instead of $341.95 at bearing age.

It is very plain to see that with a yield of only 200 pounds and a net balance of only $12.00 after cost of production and harvesting is deducted less than 3 per cent interest is paid on the $500 invested. Even during the 13 to 20 year period with 400 pounds per acre and a net balance of $34.00 after cost of harvesting and producing is deducted interest on the amount invested is less than 7 per cent. In other words, with an acreage of this size the nut orchard is barely beginning to yield a profit over and above ordinary rates of interest at 20 years of age. After 20 years, however, with a one-half ton per acre yield and a balance amounting to $100 after deducting cost of producing and harvesting the crop interest on the investment is nearly 20 per cent. The net income on 10 acres of nuts during the 9 to 12 year period, not reckoning the interest on the money invested, amounts to about $120; during the 13 to 20 year period to about $340; and after 20 years to about $1.000. Even after 20 years of age a 10 acre walnut orchard hardly affords a self supporting income.

Inter-relationship of Investment, Income, Acreage and Profit.

While the foregoing figures are more or less arbitrary and at best only approximate they bring out clearly three fundamental facts regarding the business side of nut growing: first, the larger the acreage, at least up to the point where a given equipment can serve it, the less the investment per acre. This difference in the amount of investment per acre is approximately $160 between 50 and 10 acre units. Second, the larger the acreage up to the points just mentioned the greater the income. Attention may here be called to the fact that with the smaller acreage a living income is hardly afforded, at least for 18 or 20 years. Third, profits are dependent upon both income and the amount of investment per acre and that since both are higher with the greater acreage, actual net profits on the larger areas are proportionally much greater than from the smaller areas.

Discussion.

Mr. Groner: "You have listened undoubtedly to a very able paper on nut culture but when you figure it right down and from what a farmer might do with a mixed farm, a part of his farm in nuts and part of it other things we might change those figures somewhat no doubt. In regard to the cost of planting and maintaining, some people entirely object to raising crops between the rows, but I have a part of my ground for raising nuts. I have planted various crops in seven years, I have raised two crops of potatoes. While they might be objected to, they have brought me more income than all my orchard has cost to date, actual net income as far as the cost of trees, cultivation and everything connected with it. At first I do not give the tree quite so much room, we will say we will start it 4 feet for the first year, the next year 7 feet, next 8 feet, and at the end of six or seven years I am giving the tree half of the ground.

"The part of my orchard that I have now is six years old on half of the ground and it will be my last crop between the rows. The year following that I expect to get nearly enough of nuts to pay expenses. I have a few trees that are bearing, I have only four that are six years old. These trees bore from 2½ to 4 lbs.

"Six years ago we grafted about 50 or 60 trees which have borne various sized crops. Now I have been keeping a very careful estimate on most of these trees, what they have produced. Not one of those trees was growing in the orchard. Yes, I will take that back, there are two medium sized on American black, while the rest are growing in groups around the house, etc., all of different kinds, the first crop from the 18 year old tree was three years after grafting, it bore about a peck of nuts, the next year it bore 52 pounds. This tree was standing in the mud, never had any cultivation of any kind. The next year the crop weighed about 76 pounds and this year again the crop weighed just about 75 pounds. The crops this year were considered rather unfavorable. This is called the Vrooman Franquette.

"Now another small bunch of about 20 small trees, 2 on American Blacks. These two trees bore 60 pounds of nuts."

(The question was asked how old they were.)

"I don't know. They were four inches in diameter. The other 15 or 16 of these trees were grouped only 20 feet away from the fence. This year they bore 4 sacks of 50 or 60 pounds to the tree. Now another tree that we grafted four years ago bore over 40 pounds of nuts, which was three years in cultivation and this year we looked at the tree and the owner said he was sure it would have on 50 pounds. This was a 25 year old tree. Two trees that were about three and five inches in diameter, about 2 miles from my place, I think at that time were 15 or 16 years old, on American Black roots, bore each one or two bushel sacks, we figured it about 50 or 60 pounds. This year he had a two bushel sack full and possibly 12 to 15 pounds that would not go in the one sack. Two more small trees that were possibly 3 to 5 years old or 5 to 6 years old this year had about 40 pounds. Now I have traveled around outside of my own orchard, what I saw myself, I have driven around a good deal, there is one tree of an unknown quality, no one seems to know what it is, as near as I can estimate has produced 150 pounds a year for the last seven years, sometimes more and sometimes less. It has a very soft shell, it looks a good deal like a Franquette.

"In regard to the cost of bringing up an orchard, I don't wish to dispute the figures at all, but a good many of the conditions are different, when farmers take up the work and have stock and other things. I think it would be advisable for a great many people who are taking up farming to put out 15 or 20 acres of nuts. The crops of grain and kale will usually make up the cost of the orchard, or at least it has been so with me, and in regard to the cost of harvesting the nuts, I made quite a little inquiry in California, I spent several weeks of two seasons through California, and went pretty near all over them. They figure 1½ cents in California, when the sun dries them. In one place the manager told me he figured less than 2c for the cost of harvesting and drying. Of course, in the north we have to use different methods of drying. I might say that a good many use the same system as prune drying. Another party is putting them in the hop drier, and he had such good success with the new dryer he says he can dry 30 inches of nuts on the dryer using a temperature not to exceed 110 degrees. * * * Now, as regards trees here in Oregon I know one 9 year Franquette that bore 36 pounds in one season. I know a tree over in Vancouver in 12 years that bore over 100 pounds.

"I have seven or eight varieties. I find the Gant and the Meylan both very good bearing nuts. The Gant has a very large rough nut, it is equal to the better grade of nuts, although the shell is thin, the percentage of the kernel is just as heavy or heavier than the Franquette. Now the Meylan is not a new nut, it is an old one so far as I can learn, is not up to other good producers. Now I figure that a 9 year old tree on a good average should bear in the neighborhood of 12 to 15 pounds and a 11 year old tree of a well cared for orchard ought to get up somewhere in the neighborhood of 20 to 30 pounds and a 14 year old tree ought to get somewhere from 40 to 45 pounds, well, I will say from 30 to 45. Now I have kept a pretty close tab on a Vrooman Franquette orchard at Santa Rosa; it started to bear the first year, the second and third years, the 8 was 12, the 9 was 24. Now I would not be sure whether I am starting in with the right year, maybe I am starting in a year too soon; it started the 8th year and the next year from the 12 it jumped to the 24 from the 24 it only went 4 pounds up the next year to 28 and the next year I think it went up 42 and then somewhere in the neighborhood of 45 and last year it went 60 to 62." * * *

"I planted 20 trees of pecans this year and they never started to grow until July. They were waiting for the summer to come."

H. E. Dosch, H. B. Miller, Professor Reimers and others took part in the discussion.

M. McDonald stated that he thought Mr. Groner was in error regarding yield of the Vrooman orchard of Franquette Walnuts. He had the figures direct from Mrs. Vrooman and they were as follows:

Yearly yield of Mrs. E. M. Vrooman's celebrated Walnut Grove of a little less than 1,000 grafted trees—

When	3	years	old	1901	82	lbs.
"	4	"	"	1902	520	lbs.
"	5	"	"	1903	3700	lbs.
"	6	"	"	1904	6000	lbs.
"	7	"	"	1905	12235	lbs.
"	8	"	"	1906	24314	lbs.
"	9	"	"	1907	26000	lbs.
"	10	"	"	1908	19636	lbs.
"	11	"	"	1909	47833	lbs.

Session of Wednesday afternoon, November 20th, convened at 2 o'clock, meeting presided over by Mr. A. P. Bateham, President, and the following paper read:

THE LOGANBERRY IN OREGON.

C. I. Lewis, Horticulturist, Oregon Agricultural College.

During the past two years a great deal of attention has been given to loganberry culture. The reason for this is that the loganberry has finally come into its own, and the people who have engaged in this business have been making good money, probably netting on an average about $200 to $250 per acre.

A few years ago the loganberry was a drug on the market. It is a poor shipping berry and often arrived in our markets, like Portland and Spokane, in very poor condition, with juice oozing out of the crates, and the berry was not relished as a fresh product because of its extreme acidty, and the impossibility of having it delivered in the best condition. It was found, however, that the berries could be canned and dried, and that it could be made into a most delicious jelly. It has become the leading pie berry in the country. Its juice is more refreshing than that of the grape.

Even when prices were down and loganberry men were discouraged I was bold enough to make the statement that the loganberry was one of the greatest assets the State had, because I saw that this berry had unknown possibilities, that its juice was superior to the grape's juice; that it made a first class jell, that it was a fine pie fruit, and that its organic acids were of such a nature as to be largely self-preservative. All these factors mean that this berry has almost unlimited possibilities.

There are a number of berries similar to the loganberry being placed on the market. One of these is the Primus berry, a splendid berry for home use, but too soft for shipping and not a heavy enough yielder commercially. The Phenomenal has not met with as much favor as the loganberry. Most of the people who have tried it prefer the loganberry, and the latter is now established firmly on the market, and even though Phenomenals are grown the loganberry will become the trade name. You will find loganberries now grown on a wide range of soils, from the red hills down to the river valleys. I have even found them growing on the tide lands.

Just what soils would be the best for this berry is a question, as it will take a number of years to determine this ponit. However, I know that those patches that have been put on the sandy silt loams along the rivers are very productive and fairly long lived. The principal point in choosing land for loganberries is to have good drainage. Probably any good deep well drained loam will grow this berry very profitably. The berry seems fairly exacting in climatic requirements. It is an evergreen and does not stand nicely temperatures below zero. Where cold weather is experienced it is necessary to lay the plants down and cover them. This is an expensive operation and the berry does not yield as well under these conditions. Again, the berry seems to thrive the best where the atmospheric conditions are very favorable. As regards temperature, and moisture, wherever it is hot and dry the berry does not do as well, perhaps, as in the cool moist conditions that is found in the coast counties of Oregon and Washington, and in the country west of the Cascade range. It is growing fairly well east of the Cascades in a few selected regions, such as places along the Snake River and in sections in Northern Idaho.

There is a great difference of opinion among our growers concerning the distance of planting. Some men claim that plants should be put 12 feet apart, others say 8 by 12 feet, others 6 by 6; some maintain that they should be planted in hills and pruned back.

However, the large growers seem to prefer a distance of about 8 by 8 feet. Very strong tips, or one year old plants are preferable for setting. These plants will have to be trellised after the first year. There are various methods of training and trellising. Some men interweave the vines, others roll them together in bundles and pass them over the wires. I believe probably the former method is more preferable. In training the plant it is well to remember that the best berries are found under shady conditions and that they should be so trained as to be picked with the greatest economy. It will be several years yet before we will agree as to the best methods of pruning and training.

Some growers do not prune at all, while others maintain that the cane should not be allowed to grow more than 8 or 10 feet, and as soon as the fruiting season is over in July all the old fruiting canes should be pruned off, removed from the patch, and burned. There is a bad disease making inroads on this industry, this disease being known as anthracnose. The losses from it last year were very heavy. One of the best ways to combat this is to cut off these canes and burn them, not allowing them to remain in the patch as a source of infection for future years.

Regarding tillage, we need to say very little along that score, as the tillage given loganberries is prarctically the same as that given to raspberries and blackberries. Suffice to say that the loganberry responds to good tillage; it wants plenty of moisture and is a heavy feeder.

Concerning yields, there seems to be quite a wide range but probably the average in the State for the past year was 4 or 5 tons. I found yields however, equal to a crate to the plant, one grower reporting 125 crates from 124 vines. Most berries this past year were sold to canneries at about $80 a ton. At this figure it is possible to make a very good profit.

A few growers are still evaporating the berries, it being possible to secure from 3 to 5 pounds to the crate of dried berries, the number of pounds depending somewhat on the moisture content of the fruit. With ideal conditions it is possible to dry the berry in from 16 to 24 hours. It will be necessary, however, to grade the berries well. The over ripe berries tend to caramel and scorch, whereas if the berries are unripe it will require more time for drying. The length of time will depend upon the grade of fruit type of dryer used and the skill of the evaporator.

The greatest field, I believe, for the loganberry is in its juice. With a yield of 5 tons of fruit to the acre we would have ten thousand pounds of fruit. This, under average conditions will run about 80 per cent juice, as we secure from 6 to 8 bottles of juice from a crate when we use crude methods. Possibly with hydraulic presses we could extract 90 per cent. However, this would be a matter of experiment. On a basis of 80 per cent we would have eight thousand pounds of juice, or sixteen thousand glasses. At a value of five cents a glass you can see there would be a return of about $800 an acre. This is solid juice. For drinking perhaps a half an inch to an inch of this juice in a glass of water is sufficient. Now, this figure of $800 may seem pretty high, but we must remember that in a business of this kind that the product would go through many hands, that considerable money would have to be put into bottles, bottling machinery, presses, etc., and that this would cost considerable money.

In order to manufacture the juice we first need to organize and get sufficient capital to put in a good plant with hydraulic presses, bottling machinery, and simple cooking kettles. If we wish to charge the juice we would have to make provision for doing this. It would be easy to charge it and make a sparkling beverage. And we would need some money for advertising, as this beverage is practically unknown at the present time, but it is my belief that it would be very easy to introduce it, and that the trade would take to this juice very kindly. Whether or not it would be better to bottle it here on the coast or to put the juice in barrels and ship to eastern points, where it can be made into heavy sirups for soda fountain trade, bottled for home drinking purposes, or made into jells, would be left to the market demands.

I am confident that we can ship out trainloads of this juice if we will take hold of the matter properly and that it will be possible to build up here in Oregon an industry that would be worth $10,000,000 to the State.

Discussion followed, led by Britt Aspinwall, of Independence, who said:

"After Professor Lewis' talk I don't think there's much for me to say. I won't go into any details.

"Regarding training, there are several methods—we have tried a few. We think it best to train the vines up through the wires. In wrapping them around the wires we try to keep them separate as much as possible. We use No. 12 wire, placing the first wire 20 inches high—the top wire on top of the post, the other in the middle. Posts should be five feet high when set. Use a seven foot post set two feet in the ground. A post more than five feet high is too big because the berries grow from six inches to a foot above the post in time. Posts should not be set over 32 feet apart—24 feet is better. In pruning we never trim the ends of the vines. We have experimented on that. We have taken two or three rows in different parts of the yard at different times, and for the last two or three years haven't pruned them, and find we can produce more to the acre than where we have pruned. After a vine is two or three years old it doesn't grow any. As soon as we are through picking, the very first thing we do is to get all the help we can—help is cheap at that time—and we get from thirty to fifty people and go in and cut the old vines out, throw them down between the rows, and train the new ones up, training them at least 2 feet from the ground. If you wait until September to train them they have grown an extra two or three feet at the ends and are hard to handle. After training, we always take a sharp disc, weight it down good, and go in and cut the vines, put them in the rows and plow them under. I notice Prof. Lewis hardly agrees with me on that point, but I have found in yards where they have always taken the vines out, they were worse affected with vine disease than in the yards where they don't. And they make a good fertilizer. You'd have to pay me to take the vines out of my yard.

"Evaporators cost about $50 an acre. For $5,000 a person can build an evaporator to handle 100 acres of berries. We have one tunnel evaporator that will handle but fifteen or sixteen acres—cost about $1600—$100 an acre. Figured on a large scale, say 50 acres, you can build an evaporator for $50 an acre. We always take from 24 to 30 hours to evaporate our berries—it can be done quicker—we have done it in 20 hours, but I would prefer taking 30 hours. You get a better grade of fruit and get more pounds of dried fruit out of a ton of fresh fruit than where they are run through faster, and with less danger of burning. I don't know what kind of fire you'd have to have to get through in 16 hours. We run our heat 140 degrees and aim not to have berries closer than 6 feet to the pipes. We run the heat from 135 to 145 degrees and when crowded 170 and 175 degrees. But it pays better to put a little more money in the evaporator, build it a little bigger, and dry the fruit a little slower—you get more pounds of fruit."

Prof. W. S. Thornber: "What price do you pay for fuel?"

Mr. Aspinwall: "We pay different prices—have some we got for 25c a cord stumpage besides cutting and hauling—sometimes pay $1.25, sometimes $2.75—had better figure $3.50 per cord."

Mr. Groner: "How many cords to the ton?"

Mr. Aspinwall: "It takes about a cord to a ton of dried berries. It doesn't take as much to run an evaporator for berries as for prunes. In July when the mercury stands around 90 to 100 outside you can run the heat lower."

H. B. Miller: "What price do you pay pickers?"

Mr. Aspinwall: "Twenty dollars a ton. First two weeks we pay 4-5 to 5-6 cents a pound—next two weeks a cent a pound, and for balance 1¼ cents. It figures out for the season practically $20 a ton. We get our pickers to stay by offering them a little more money for the balance of the time."

Mr. Lafollette: "How long does the picking season last?"

Mr. Aspinwall: "Lasts about six weeks—don't know as we ever got through in less than five weeks."

Mr. Lafollette: "What do the pickers make?"

Mr. Aspinwall: "A good picker can make $2.50—but the average make about $1.50."

Mr. Lafollette: "What would it cost an acre to take the loganberry vines away?"

Mr. Aspinwall: "Can't make an estimate because we have never carried them out—it would be a big job—can't drive through the yards with a team—would have to carry the berries to the end of the rows. In setting out yards the rows should not be too long. Pickers have to carry the berries out to the end of the rows. We have some rows 50 hills long 8 feet apart and several 25 hills long?"

Mr. Lafollette: "What's the net profit at 4 cents a pound "

Mr. Aspinwall: "Our net profit this year from sales was practically $240 an acre. We got a little better than 5 tons to the acre.

Mr. Lafollette: "Is that about average?"

Mr. Aspinwall: "The average this year was between four and five tons to the acre—came to $400 an acre. For picking we paid a little less than $20 a ton—$100 an acre—and all other expenses didn't come to quite $60—about $240 net."

Mr. S. H. Brown of Gervais read the following paper on

THE LOGANBERRY

Spraying the loganberry and its benefits will be the main subject of my talk to you today, and I will also say a few words of my method of cultivating, fertilizing, harvesting, etc.

Before beginning I wish to state that what I will say to you, will be the way I work it on my place, and whether it is right or wrong, I will leave it to you to judge, and want you to take what I say to you merely for what it is worth to you.

While I am thoroughly convinced in my own mind that spraying the loganberry is as beneficial as it is in an orchard, yet I hesitated to talk on the subject this year, as I have had but one year's experience with the spraying.

As soon as the harvesting is over, I cut the old vines out and throw them in the center of the row, train up the new vines, and with a rake that I had made, drag out the old vines and burn them as soon as the weather will permit, and by so doing, stop any further infection of the new vines.

This rake or drag is made by taking a piece of two by twelve plank, five feet long, this to be used for the cross-piece, to this and on top of it is bolted seven teeth, or fingers, each six feet long and 1½ by 2½ inches in thickness and width, and sharpened on the front end; below this cross-piece, and directly under the second tooth from each side is a small runner, notched on the top so it will come up against the tooth, and high enough to raise the cross-piece three inches from the ground; a handle behind so the teeth can be held up by holding down on the handles, also for pulling it back out from the load at the end of the row, or the dumping place; twelve foot rope trace extensions, with hook in each end of rope, the back end hooked in an iron eye on end of the two by twelve cross-piece so it can be unhooked when ready to dump load, and while driver is turning the horse around, the other man can pull the rake from under the load, turn it around, and be ready to hook on again.

Two men with a good steady horse can clean off the vines from a vineyard of ordinary growth of vines at the rate of about an acre per hour; this rake costs about three dollars, and can be made by almost anyone that is handy with tools.

As soon as the old vines are out of the way, about the middle of August, I spray the new vines with a lime-sulphur solution, of one and one-half degrees strength, or if using the commercial spray, which is thirty degrees strength, I use twenty parts water to one part solution.

I use a gasoline sprayer, mounted on a narrow truck wagon, and with two leads of hose, one twenty-five feet long, and the other fifty, can spray one side of two rows at the same time.

My object in having one lead of hose longer than the other is to enable one man to walk behind the other and by so doing will not be in each others way.

The material for spraying costs about one dollar per acre, and it can be applied at the rate of about five acres per day.

My berries this year were of very large size, and absolutely free from dried or shriveled ends or sides, or rotten cores; and were the only loganberries that were shipped from Gervais this year that were absolutely free from infection.

A man living in my neighborhood, planted a small patch the same year I planted mine, the plants were from the same vineyard, last year (1911) his berries were slightly infected, mine were also; this man did not spray; this year his berries were so badly infected that I was ordered by the canning company not to receive any more of this man's berries as they were unfit for use.

Last week I visited a yard near Salem that is entirely ruined by the cane Anthracnose, and will have to be plowed up as it is now worthless; I have some of the infected canes from that yard with me here for your inspection, the infection can be plainly seen on them.

It is my firm belief that if the loganberry growers of the Willamette Valley do not take immediate steps to destroy this pest, they will be in the very near future facing a very serious problem; I consider spraying as important as cultivating.

Instead of using the old vines for a mulch (which I consider a very unwise thing to do) I sow vetch between the rows as early in the fall as possible, or before the September rains if possible, and by cultivating time in the Spring it will be about knee high, I plow it under for a mulch, which I believe makes an excellent fertilizer; I sow one bushel vetch and one bushel oats per acre, using a corn row drill (single disc) for same.

In the Spring as soon as the ground is in shape to work, I plow the vetch under, throwing it away from the vines; for this I use a three-bottom vineyard gang plow which is an excellent implement, one round to the row plows it as near to the vines as is safe.

As soon as I am through plowing, I begin with my horse hoe, another implement that is indispensable to berry growers, as it not only does the work much better than hand hoeing, but one man and a good steady horse will easily do the work of ten or twelve men;

these hoes are handled by the John Deere Plow Company and can be had for ten dollars each.

When I am through with the hoe I go once through with a disc harrow set to throw the dirt together, or away from the vines; I do this merely to cut up any sods or bunches of grass that will be thrown out from under the vines by the hoe.

I believe a disc will do far more harm than good in a berry vineyard unless it is used with great care; unless a person is very careful they will go too deep next the vines, and by so doing will cut a lot of the surface roots and cause them to bleed; except for cutting up sods or grass as I have described before, I never use a disc in my yard, and when I do, I am very careful to have it set so the outside discs will not go too deep; I am a firm believer in shallow cultivation close to the vines.

After harrowing it down with a spring-tooth, I throw the ground back to the vines; using first a small walking plow, and throw one furrow with it to the vines, then I take the vineyard gang, and one round to the row will finish it up.

After this I use nothing but a spring-tooth harrow and smoothing harrow, except going through once more just before harvesting time with the hoe, throwing the dirt up under the vines, or rounding it up so the grass and weeds that will come up after harvesting begins will not be in a kind of furrow that is left there by the continual use of the spring-tooth and smoothing harrows.

One man can easily do all the team work in a thirty acre vineyard if outfitted with the machinery that I have mentioned.

I, as well as nearly every other large grower of berries, have trouble holding the pickers at the last end of the season; in order to stop that trouble, I last year established a bonus system; I require the pickers before beginning work, to sign a contract with me, agreeing to stay the season through, and to comply with other rules that I have included in the contract; if they live up to these rules, I pay them a bonus at the end of the season in addition to the picking price. If they do not comply with the contract, they forfeit the bonus.

This year less than te nper cent forfeited their bonus, which I considered remarkable, and the pickers were generally pleased with the plan except, of course, the ones that forfeited the bonus.

I am under contract to plant seventy acres more berries this year, and expect to take care of and harvest them along the lines that I have explained to you; I also expect to be in a position to experiment with irrigation in the vineyard that I now have this coming year.

Mr. Miller: Would a disc like that be of any use in our orchard?

Mr. Brown: I think so. It will cut all right—you can do anything with it.

Mr. Miller: Where do you find it?

Mr. Brown: John Deere Plow Company.

Mr. Groner: Would it be of any use in a corn field?

Mr. Brown: Think it would be excellent if the corn is so planted that you can plow between the rows.

Mr. Groner: Would it be practical in an orchard?

Mr. Brown: Three 8-inch plows would do the work in excellent shape.

Mr. Lafollette: How many tons of berries to the acre?

Mr. Brown: About 3½ tons—mine averaged 6 tons—12,000 pounds.

Mr. Lafollette: Got your plants of me, didn't you?

Mr. Brown: I did.

Mr. Lafollette: I understood you to say in 12 hours you hauled cuttings from vines of over 16 acres.

Mr. Brown: Yes, with two horses and one man.

Mr. Lafollette: Couldn't have had the vines that I have on my place—twould have taken 10 men, three days.

Mr. Brown: Let me explain. The first year that I had berries I had them frozen out—I've made some mistakes—I know it now. Then I bought new plants, followed Prof. Lewis' advice in caring for them, and this year I had the best vines I've ever had.

Mr. Lafollette: Well, if my vines are going to die the way they have been dying I'm perfectly willing to let 'em. This year my patch made as much or more than ever and the old vines are rotting around the roots. You go out into the forest and hunt wild berries and you'll find the best berries where the old rotten wood or logs are. This year I had 12,000 pounds per acre. I have three acres and 60 rods and I never had my berries refused because of disease. I'd like to have some of you come down and look at Mr. Brown's patch and then mine and see the difference. I cultivate with disc all the time, too.

Prof. Lewis: Let me say a word. I visited all the berry patches around that locality and I'd give $100 an acre more for Mr. Lafollette's land than for Mr. Brown's or Mr. Aspinwall's, which accounts for the difference in the growth of the vines and fruit. Mr. Lafollette has the finest piece of land in the Willamette Valley for raising loganberries, and one of the best pieces in the State of Oregon.

Mr. Brown: Mr. Lafollette seems to have an idea that I always burned by vines. I never did until last year—used to cut them up and put them between the rows until I visited the Oregon Agricultural College. They told me there what to do and this year I followed their directions with good results.

Then followed discussion on

ORCHARD PESTS.

By Prof. Lawrence.

Prof. W. H. Lawrence said: I am sorry Professor O'Gara is not here to open the subject since my work in the Hood River Valley is very general. We do not confine our activities to controlling the pests alone but are attempting to solve all the problems of the Hood River apple growers by aiding them in any and all problems. Our plan is to render assistance to every one and to cooperate with every one who can be of any assistance to us.

I wish to give you a brief summary of what we have undertaken to do. Before I do, however, allow me to tell you what has been accomplished with respect to eradicating fire blight. When I came to the Hood River Valley fire blight had spread over more than 3,000 acres of apple orchards. Professor H. S. Jackson of the Oregon Agricultural College, and Mr. G. R. Carstner, fruit inspector for Hood River County, had been working on the disease and had made good progress toward its control. The following year Mr. Castner and myself continued the work and with the assistance of careful workers had in 2½ months practically eliminated the disease. We went over the territory very carefully but were unfortunate in missing three small infections. This necessitated going over the same or a part of the same area a second time. Since that time we have not found a single infection nor has a case been found by any of the growers. General inspection work is being carried on in addition to the research work.

An attempt is being made to eradicate San Jose Scale. Many of the fruit trees in out of way places and in town are infested with this scale. We have inspected these trees and have notified the owners to clean them up or cut them down. In cases where they do not do the work we do it ourselves, but at the expense of the owner.

We are working toward the more economic control of all plant diseases as well as insect pests.

The above illustrations will give you a pretty good idea of the methods we are following in Hood River to get the pests under perfect control.

As I said in opening, the control of the pests is but a minor part of the work of the office. There is a disease of the apple called Little Leaf, Winter Injury and Rosette which is quite common in all of the apple growing districts of the northwest. Most of you know the disease. It is one of the most serious of the diseases of the apple tree—one of the most preplexing we have undertaken to solve. We do not know up to this time whether it is caused by an organism or due to uncongenial climate or soil conditions or both. We have made a large number of observations indicating the same might be due to a bacterium but we have not been able to prove that this is true. Dry Rot of the fruit occurs throughout the State of Oregon and is closely associated with winter injury. The question now arises whether winter injury of trees and the dry rot of the fruit are not two forms of the same trouble. We are trying to solve this question, working in cooperation with the Oregon Agricultural College. Whenever they can aid us or we can give them assistance you will find us working together. We have also been working in cooperation with the Department of Agriculture in solving these problems. We have, therefore, been able to attack the problem from almost every standpoint.

The following illustration shows our method of cooperation—a method which does not duplicate work and at the same time gives all the cooperators the desired information.

We wish to know if there is any relation between the soil and soil conditions and winter injury. We go down to the Oregon Agricultural College for a conference with all departments interested in this line of work. I tell them what I know about the conditions and what I hope to do and arrange to cooperate with them. A request is made of the United States Department of Agriculture for a survey in order that I may know the number and exact location of each type of soil occurring in the valley. Mechanical analyses of some of these types is being made by the Oregon Agricultural College to study critically the influence of soil structures. Data is being secured on the mineral composition of some of the types. A chemical analyses of all types is being made by the O. A. C.

There are certain poisons, perhaps, in the soil that have an injurious effect upon the trees and other crops. The Bureau of Soils of the United States Department are kindly looking into this condition.

When the data is all collected I can make a very critical study of soil conditions vs. winter injury.

At the time samples of soil were dug automobiles were furnished by citizens of Hood River free of charge. The secretary of the Hood River Commercial Club rendered very effective service. Cooperating as we did it took two days to secure all the samples for the above soil studies.

There are frosty areas in the State of Oregon. The question of temperatures being responsible for winter injury came up. Through cooperation with the Weather Bureau temperatures were taken at eight different stations during April and later. Records from these eight stations, as well as field observations, show no serious frost injury in the valley. Three successive light frosts, in places where air drainage was somewhat restricted, killed the first blossoms, yet the fruit set so abundantly that thinning was necessary.

On request the office of the Agrostologist of the United States Department of Agriculture sent us cover crops to try in the Hood River Valley. In all 300 forms have been grown. A majority of these have been grown on four types of soil during the same period.

We have data concerning the adaptability of some cover crops showing that there are plants better adapted to use in orchards than those generally recommended. The fact that some cover crops when planted under trees grow nicely until they are about 6 inches tall and then die is worthy of note. Also that other cover crops when grown under the same conditions grow strongly, making a better growth when more remote from the tree. There are, apparently, products in the soil which some crops use as foods while toward others they act in a very harmful manner. I speak of this observation to show you why I have so little faith in some recommendations now generally made relative to the growing of shade or cover crops.

There has been a grat deal of speculation in the handling of apples in common and cold storage. When I came to the Hood River I had some notions concerning certain factors influencing the keeping of apples in storage. We have placed in storage quantities of apples representing 20 to 30 different experiments. We are not ready to report results. We did find, however, there are certain diseases causing serious losses of apples in storage. I refer in particular to anthracnose, a disease which every grower in the State knows or should know. It not only attacks the apple tree but also attacks the fruit of the apple and quince.

You can readily see from what I have said that we are not only working to control the pests but are cooperating with everyone who can be of assistance. We expect to continue this cooperative work until we know how to control all of the orchard troubles: You cannot go into any apple growing section in the United States where you will find the trees in better condition or freerer from diseases and pests than those in the Hood River Valley. This work has only been possible through close cooperation with the Experiment Station of the State. In the present work assistance of the Experiment Station has made it possible to cover a wide field and to accomplish the results secured up to this time.

Mr. M. O. Nelson: I'd like to know if the San Jose Scale is prevalent on any trees of the forest?

Prof. Lawrence: On but two of the wild trees—the Red Alder and Wild Hawthorne. These are located along small creeks running through orchards and it is going to be very difficult to destroy all these plants.

Mr. Nelson: Has the elm tree any of the San Jose Scale?

Prof. Lawrence: In my experience I have never seen the San Jose Scale on the elm. The Mountain Ash grown as a shade tree in towns is very badly infested.

Prof. H. S. Jackson: Would the seriousness of the San Jose Scale justify the destroying of forest trees?

Prof. Lawrence: It would in the Hood River Valley, because it is from these trees that infection is taking place constantly. This is the situation there. There are probably two or three hundred trees absolutely plastered with the scale outside the orchards. Until these trees are destroyed we are going to have a continuous fight in the orchards to keep the insect out. Destroy the host plant and you get rid of serious infestion. I believe in this one case it will certainly pay well to destroy the plants.

Mr. Nelson: Isn't it true there are at least 100 different tracts somewhat apart, slightly infected, yet so scattered as to make it questionable whether this work would really pay?

Pro. Lawrence: In the Hood River Valley conditions are different from those in other valleys. We don't have a great number of plants to destroy. Prarctically every part of the valley where the scale occurs has little or no plants except a few growing along the roadside, which is going to make it very easy to destroy them. I am quite sure in other parts of Oregon we won't attempt to destroy all of them.

In our valley prarctically the whole area is under cultivation and planted to trees. It is a very good plan to spend a little time in cooperation with the road supervisors in destroying the few plants in roadways which is entirely agreeable to them, to the county court, and to everybody concerned. Through cooperation, it would take 15 or 20 men a very little time to destroy all these plants. Two weeks' work and practically all undesirable plants growing within the orchard sections are eradicated. They will not be able to go back very far, yet at the same time cutting the trees along roadways where the San Jose scale has become established infection in orchards will be very materially lessened.

Thursday, November 21, 9:30 A. M.

Meeting called to order by Vice-President E. H. Shepard.
Address on

STANDARDIZING OF GRADES, PACK AND PACKAGES FOR APPLES.

By Mr. C. E. Whisler of Medford, Oregon.

I am pleased to address you this morning, which in my mind is a very opportune moment for action. I want to say, men, that I have in a great degree changed by mind since I first engaged in this fight of standardization. At first I argued largely that the law of the survival of the fittiest would eliminate the poor and sustain the strong and that laws were rather unnecessary under such conditions to support the strong and to eliminate the weak. On many products that will hold good, but on a proposition that is handled as apples, by so many thousands of individuals, it is not a good rule. If there were but a thousand men handling all the apples in the world, or in the United States, and all apples were put out under their names it would be an easy matter to eliminate the weak and sustain the strong, because the consuming public would soon become acquainted with the characteristics of each man's product. It is impossible for the general consuming public to become acquainted with the individual character of each man's product, and because of the fact I have changed my mind very much relative to the question of leaving standardization to the individual growers or to the associations that are putting out the product.

This question of standardization has been raised relative to other products than the apple. The cranberry merchants and the strawberry merchants were raising it before apple men were, and a bill was introduced into Congress more particularly to regulate the cranberry than anything else.

Confidence is the life of trade. Without confidence no trade. The higher the confidence the more trade. Confidence in the purchasing of apples must relate to two things—confidence in quality; confidence in quantity. Because if you had ever so much confidence in the quality and thought you were imposed upon and only got a fraction or portion of that quantity, you as purchaser would waive the question of quality to a degree and yield to the advantages that may be in the question of quantity, and therefore the man who has the quantity will have the advantage in the question of trade.

Now the question of quality is one of the highest necessities for consideration, I believe rather preferable to the question of quantity, for the reason that in the question of quality you can make the box to eliminate the bad and the poor to such a degree that you stimulate the question of quality; and that, in my mind, is the better aim of organized effort.

The question of standardizing a quality makes it possible to eliminate the great volume of inferior stuff which is always operating against us. * * * I saw introduced as evidence before the committee at Washington barrels of apples which would make you ashamed to think you belong to apple growers. But there were barrels brought in there as nice as I ever saw, but when they were dug down into it was scandalous, the condition of the interior of the barrels. That shows it was malicious on the part of someone. This action on the part of some packers is retarding the consummation of apples, because it is breaking down the confidence between the consumer and the producer. You stimulate confidence when you give an honest pack. The trade goes after the packer in whom they have the most confidence. The wise producer recognizes the laws of trade, and in Canada they have a law that is bringing them in great results and is giving the foreigner a confidence in the Canadian product that is injuring the sale of the American product because they put up a better pack. It is evident that if we intend to increase our out-put we must increase our consumptive capacity. To do that confidence is necessary. We must secure an established grade of quality as well as quantity. * * *

Three times the question of standardizing the box or barrel for packing has come up before Congress. The first bill presented provided for a box with a capacity of 2,500 cu. in. and was made with a square head. Now it is evident that the man who drafted that measure was not an apple man. Mr. Dumas of Washington took the matter in charge with more force than any other man. It did not come before the committee for consideration. I was able to show them the ridiculousness of making an apple box with square head. That in itself was a strong measure in defeating the bill. The capacity of the box was so much more than a bushel that it was defeated on that ground. In the Lafean Bill they attempted to overcome the defects of the original bill. They gave the contents of the box but said nothing about the shape of the box. It was introduced by Mr. Lafean of Pennsylvania. He was not a producer of apples. He was an influential man in Congress. Under this bill any man could make a box to suit himself. The recommendations for that specific capacity was to be one-third of the capacity of the barrel standardized by the State of New York.

* * We cannot do anything until we get the cooperation of Colorado and Utah. Simmered down, it is a box and barrel fight between the box and barrel states.

* * I am ready for standardization whenever you can get what you want. Whenever the bill submitted by the Northwestern Fruit Growers' Association does go through it is for the consideration and endorsement of the growers. It is not a commissionmen's measure. It is your measure. * *

Relative to the question of using two boxes. A gerat many insist that they must have two boxes. I do not believe it. I do not believe there is an apple in the Northwest that cannot be scientificially packed in one box; and when you do use one box it eliminates a lot of trouble for yourself and for the men at the other end. We have been doing it in Oregon for some time. It is just a matter of education.

Several of the states are taking up the matter of standardization for state enactment. I do not support this. One state might make a box or grade a stadnard and another make something else a standard. My opinion is that if one Federal law for uniformity of grades and packs were passed it would eliminate the necessity for any state action. * * *

Giving the capacity of the box in cubic inches does not tell you anything about the size of the apples or the grade of your product. This proposed bill provides for telling how many apples are in the box.

You might give the number of apples in the box but nothing as to size or grade. Half might be little and half great big ones. Therefore the number of apples should be on the box and they should be reasonably uniform in size.

Mr. C. A. Malboeuf: Under present conditions the majority of the trade knows our apples in the Northwest by a term that in the general meaning has become odious, that is, "Tier". That is supposed to represent a manner of packing which they could depend upon, but they cannot, as it does not represent that. It does not automatically show what the numerical contents of the box is. If we are putting up a layer pack and there are say, 120 apples in the box that is going to be a peculiar pack if there is not 120 apples in the box. When the trade gets a jumble pack they do not know how many apples they are getting. If we don't show indirectly the size of our apples that is not going to induce confidence.

If Colorado wishes to continue its jumble pack and is regulated by the same law as our pack, isn't the fact of Colorado's poor pack going to affect our pack in regard to Federal legislation? The man who is used to Colorado apples, is he going to look for our layer pack or not? How are we going to get the trade's confidence in the layer pack unless they know in advance the superiority of our pack and style?

Why could not the bill provide that the pack be described as a jumble pack, a layer pack, or a face and full pack.

Mr. Miller: Something should be said to designate the difference between our pack and those of other states. Could it not be specified on the box?

Mr. Malboeuf: Is there anything objectionable to having the term marked? I think it is a great advantage for what we want is to go out into the world as having a high standard. We want the box to show it. Of course we ourselves might know that, but we want it so plain that no one can assert that in our box they do not know what they are going to get.

I move, Mr. Chairman, that the bill provide that the stamping on each box shall indicate the character of pack it contains; namely, a layer pack, a jumble pack, or a face and fill pack.

Mr. Miller: If we use those words, jumble pack, might it not be objectionable to the people of Colorado who would prefer some other term? Would it not be preferable that we have box marked "designating the character of pack?" I would not like to have put into this bill any word which people who are to endorse it would take objection to. Why not say "layer pack or otherwise" and let those districts choose the term they would employ on their boxes?

Mr. Beebe: How would you recognize that pack?

Mr. Miller: We are trying to get a measure that would cover our character of pack, but we have got to harmonize that in some way with people who want to act in a different way. Otherwise they might fight the whole thing. Maybe they would say "irregular pack". Let them choose the term.

Mr. Shepard: I think your point is well taken. If you suggest a term that will seem to discredit their character of pack they will be inclined to oppose the bill for that reason. Leave it open as to name so that Colorado may fill in some term agreeable to them.

Mr. Malboeuf: The point is well taken.

Mr. Beebe: The only thing necessary in the bill would be to say "designate the manner of pack."

Mr. Whisler: What is the matter with that? And if we use a "tier pack" or "layer pack" let it be so marked and let them mark theirs in their own way.

That practically completes the bill. I have attempted to safeguard the consuming public. I have not said anything relative to sorting or other grading in the bill, or the question of quality. We are very much at sea at the present time on the question of grades. Until this is done it is useless to attempt to secure the passage of a bill as to grades.

When you talk about contents, you can determine that by a foot rule. You can agree as to weight. But we can't agree as to color. But on the question of size, I think a dollar is sufficient penalty for a box which does not come up to the standard. In that case it amounts practically to confiscation of the apples.

I would like very much to see some action taken by this society. Otherwise we are going to lose the ground that has been gained. This box measure is gradually growing out and it is up to you to get the action we want. We have the support of the Western Federation of Fruit Jobbers and the endorsement of the society will help matters in getting this bill passed.

Mr. Malboeuf: I would like to ask what view are the eastern interests going to take if we do not provide a grading basis.

Mr. Whisler: They said they would let that stand upon its own merits, inasmuch as there is so little opportunity to do in the box what is done in the barrels in the way of deception.

Mr. Malboeuf: You do not feel that a bill presented in the present shape is likely to provoke an adverse bill with more strenuous measures?

Mr. Whisler: I think not. The advocates of legislation have been The Western Federation of Fruit Jobbers, The National League of Commission Merchants, and The National Apple Shippers' Association. Each of these are in support of our measure today. Oregon has one sized box. Colorado had one that was one-eighth larger. California has three sizes, and it is a continual confusion as to the question of quantity. * * There is no antagonism to the bill from the Northwest.

Mr. Beebe: Mr. Whisler says that the penalty for under-grade is not to be more than $1.00, but does not say how small.

Mr. Whisler: I would like to make an improvement on that and make it $1.00 and costs.

Mr. Malboeuf: Mr. Chairman, I move that Section 3 be amended to provide that the stamping on the box be such as to indicate the character or style of packing. Carried.

The following amended bill was then adopted by the society and copies ordered sent to the horticultural societies of Washington, Montana, Idaho, Utah, Nevada, and California, for approval:

A Bill to Establish a Standard Box for Apples and for Other Purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled.

Section 1. That the standard box for apples shall be of the following dimensions when measured without distention of its parts: Depth of end, ten and one-half inches; width of end, eleven and one-half inches; length of box eighteen inches inside measurements, and representing as nearly as possible two thousand one hundred and seventy-three and one-half cubic inches.

Section 2. That any box in which apples shall be packed and offered for sale that contains less than required number of cubical inches as prescribed in section one of this act, shall be plainly marked on one side and on one end with the words "Short Box", or with words or figures showing the facttional relation which the actual capacity of the box bears to the capacity prescribed by section one of this act.

The marking required by this paragraph shall be in black letters of the size not less than seventy-two point block gothic.

Section 3. That the box when packed and offered for sale, shall bear upon the label end in plain figures the number of apples contained in the box. Also in plain letters the style of pack used. Also in plain letters the name of the person, firm, company, or organization who shall have first packed or authorized the packing of the same. Also the name of the locality where the apples were grown. Also the name of the variety of apples contained in the box.

Sectoin 4. That the apples contained within the box when so packed and offered for sale shall be reasonably uniform in size.

Section 5. That the boxes in which apples are packed in accordance with the provisions of this act may be marked "Standard."

Section 6. That boxes packed with apples and marked "Standard" shall be deemed to be misbranded within the meaning of this act:

First: If the size of the box does not conform to the requirements of section one of this act.

Second: If the markings on the box do not conform to the markings required by section three of this act.

Third: If the size of the apples do not conform to the requirements of section four of this act.

Section 7. That any person, firm, company, or organization who shall knowingly pack or cause to be packed apples in boxes, or who shall knowingly sell or offer for sale such boxes in violation of the provisions of this act, shall be liable to a penalty of one dollar and costs for each box so sold or offered for sale, to be recovered at the suit of the United States in any court in the United States having jurisdiction.

Section 8. That this act shall be in force and effect from and after the first day of.....................................191........

Mr. Miller: I want to offer a suggestion along another line that ought to be considered in the meeting next year with a great deal of attention and ought to have a special committee appointed to look into it. It is this: Portland, it seems to me, looking a little way into the future, is going to be one of the great apple shipping ports of the world. There is now planted something like 16,000,000 apple trees in Oregon, Washington, Montana, and Idaho. I think it is safe to say that by 1915 there will be somewhere between 30,000,000 and 40,000,000 boxes of apples that are likely to find access to the world's markets through the City Portland. Just what proportion will come this way and what proportion will go some other way I am not prepared to say, but beyond a question Portland is going to be one of the greatest apple shipping ports in the world. There is no way of meeting the conditions that exist in the markets and of achieving the best reesults except we go farther into national legislation. I found a few years ago there was a great demand for the Canadian apple where they had Governmental inspection, and the people found that meant a great deal, for they could rely upon it. So the demand was ever so much greater for the Canadian apple in other ports than for the apples from American markets. It seems that this society ought to take up the question as to Federal legislation as to inspection. Our apples should have a quality and character sustained by the Government. We must have federal examination, federal inspection, and federal endorsement of our interests. There should be someone appointed to investigate Canadian inspection and the laws governing export of apples out of Canada to Europe. We should have our trade assured before the Panama Canal is opened. We must make some provision for extending our market into the world. We cannot do that without we get some endorsement from the Federal Government itself. We need and must have laws for that purpose. Let us be prepared at the next annual meeting to consider that question definitely and harmoniously and let us also take the lead in presenting that question to the States of Washington, Idaho, and Montana.

I offer the following resolution:

"Resolved, that a committee of five be appointed for the purpose of considering the question of national legislation in the way of inspection laws and requirements concerning the export of apples from the Northwest, including the investigation of all existing import laws of foreign countries. The said committee to confer with representatives of the horticultural societies in the adjoining states the view of arriving at a basis for cooperative work."

I would like to suggest that that committee be composed of one from the Hood River Valley, one from the Rogue River Valley, one from the Grande Ronde Valley, one from the Willamette Valley, and leave the other to the pleasure of the chair.

The resolution was adopted and the President announced the following as a committee:

Mr. H. B. Miller, Portland, Oregon, (Chairman).
Mr. E. H. Shepard, Hood River.
Mr. C. E. Whisler, Medford.
Mr. C. O. Ramsey, La Grande.
Mr. C. A. Malboeuf, Portland.

Thursday, November 21, 2 p. m. Meeting called to order by President A. P. Bateham. Paper entitled

APPLE GRADING IN THE PACIFIC NORTHWEST

Read by C. A. Malboeuf, Secretary Northwest Fruit Exchange.

Before reading the paper, Mr. Malboeuf introduced the subject by the following remarks:

I am going to keep away from statistics today and try to get down to practical facts. We have been fed on fruit statistics so regularly during the past few years that I think we need a plate of facts in order to make the analysis and the real meaning of it complete. The most appetizing dish we have been getting, is that the apple crops of the United States were decreasing so rapidly from year to year, that there was really a danger of the extinction of the apple in every section except the Northwest. This idea has been the favorite brand of oil that we scattered over the waves of contention which arose with the cry of over-production in the Northwest. Some of us took the suggestion so seriously, that I have heard it said by more than one grower, that we were too particular about the quality of our apples, and that we could make more money if we were not so particular because there was no danger of competition.

Now we have got to stick our heads pretty deep in the sand if we want to avoid seeing anything around us that looks like competition. That is true in any business nowadays. I am not here to discuss what the future of the Eastern apple is going to be; however, as that is only incidental to the situation, for the reason that the apple in general is not by any means the greatest competitor that our Northwest apples have. Strange as it may seem, the banana has that distinction. More than 120,000 cars of them will be eaten in the United States this year. Why? Because the banana is the most logical fruit to eat out of hand. It is the most convenient article of fruit we know of. It is seen on the markets every day in the year; it is to be found in every market of the land from the single store town to the largest cities. It outsells the orange in cheapness, and can usually be depended upon to outsell our boxed apples at the prices we can afford to sell them for. If these qualifications of the banana were not recognized, it is very doubtful that it would have been made the most ideal staple article of green fruit we know of. It is true that this has been accomplished through a perfect system of merchandizing methods, but that system would not have been developed if the banana had not been possessed of those different conditions.

The orange is the next competitor of the apple. California, Florida and Arizona will produce somethting like 60,000 cars of them this year. Every food product, whether in its green or prepared state, is a competitor of the apple, as well as of other fruits, and we all know, who read, that fruit products, in their various forms, are increasing in quantity every year. That of itself means competition and nothing else. So when we try to console ourselves with the idea that our apples have a wide open field in the markets, and that there is no competition, we are looking through the wrong hole in the curtain. These are not alarming statements; they are mere facts. Intelligence always appreciates and recognizes the force of facts and gets busy. I think the more we introduce them at these meetings, and cut out rhetoric the better. So let us believe that we have lots of competition, but that we have the brains and the goods to meet it squarely.

One of the ways to meet this competition is to do what the other fellow is doing. We must make the Northwest apple a popular article in all markets. The moment any article gets to be universally popular the advertising value of that effect is tremendous. Funny papers and stage jokes would not center on the banana and the watermelon, if they were not both on the top floor of popularity. The first step to make the Northwest apple popular is to advertise it in the correct way, and that means in a broad, scientific manner, as well as in concentrated form. Thousands of dollars can be wasted in injudicious and independent advertising, and millions made through clear headed cooperative advertising. This is one of the most important things that the Northwest must take up. California found it necessary to advertise her oranges, and has gotten untold benefits out of it. They are spending this year not less than $150,000 for that purpose. Florida will spend $20.000. These are huge sums of money, but the levy against each box is so small that the individual grower does not notice it. The advertising policy of the California orange growers is one of the most effective and ably handled get-together schemes ever taken up in behalf of a perishable product industry. The Northwest won't hurt its pride a bit if it follows California's example.

Uniformity.

We people out here adopted a new expression during the last few years. We say that "we raise the finest apples on earth." That is true if we qualify it. We ought to say that we can raise them if we try, because we certainly can and do raise some very fine ones. We grow some very poor ones also, but perhaps we don't realize it. Out of sympathy for the poor apples, I think we ought to say that they raise themselves. At any rate if we don't realize that they are the creatures of neglect or inability, it is a serious mistake. The other mistake we make is in trying to ship them. We can forecast the result of these two mistakes in a few words, but before we offer any conclusions, let us first go into the details.

If we reflect for a minute we will realize that apple growing in the Northwest would never have reached its present magnitude if it were not for a single factor. That factor is distinctive quality. If we simply grew ordinary apples, there would be no industry here today in any modern sense; we would have kept up the old time methods of growing, and would not have had to discuss its perplexing problems except perhaps to find a market for the moss. Now when we use the word "quality" as applied to our apples in the Northwest, we must do so very advisedly and understand exactly what we are talking about. The word "quality" in our case must be qualified to mean "superior quality", that is to say the very best that we can raise. Then we must compound the term and call it "uniform superior quality". Granted that we can produce "superior quality", it is up to us to see that it is made and kept uniform. That is all there is to it. It is about uniformity that I have been privileged to speak at this meeting.

The first thing we want to discuss is why we are so particular about quality. It is not a very long story, and we will go into it briefly. To begin with there is the transportation handicap. The average distance we ship our apples to now is about 2500 miles. I don't think that distance is likely to decrease as our production increases, because the more fruit we have, the greater effort we are going to make to try and fully develop the markets we are now using, and a great many more that are East as well as West of the 2500 mile center. In other words, we must reach more people, and the more we get into the foreign markets, whether they are in Europe or anywhere else, the greater the average shipping distance is going to be. Now the further we go the more it costs. The cost today is often as high as a dollar a box. If we figure what it costs to transport the apple to the present average market, we will find that it is not less than 50 cents.

We always want to keep in mind this freight cost. It is so important that we ought to have a picture of it hanging on every tree in the orchard, and renew it every Thanksgiving Day. That is the most forcible demand for quality that I know of. It does not matter what price we get for our apples out here, or whether we have competition or not, we must not forget that the consumer has to pay 50 cents freight before he gets the apples. Now no one is going to pay a toll of a cent a pound for the privilege of buying our apples if he is not sure of getting something very fine. He cannot be sure of that unless he knows that the quality is there in the first place, and is kept up. The freight cost is therefore an exchange for quality. It is a premium that the consumer pays for quality. So it is up to us to see that the quality is established and kept up.

The freight cost, therefore, cuts some figure. As a matter of fact it cuts so much figure, as we shall see later, that even if the railroads were to haul our apples to the markets free of charge, we could not expect to get any more for them than the cost of production, if we were lucky enough to get that, unless the inside of every box was a combination of the quality I have spoken of, that is to say, a uniform superior quality.

I stated that the consumer pays the 50 cents a box freight. That was only a figure of speech. The grower pays it, because it is added to the cost of production. That is why I suggest that every grower ought to think of this freight cost every night before he retires and the first thing every morning.

The next element we have to consider is the competition from other districts. We find this fact in every direction we look, that every other district outside of the Northwest, can either grow its apples cheaper than we do, or they have lower freight rates to the markets than we have. So any way we analyze it, we see the freight cost is a factor.

It is not necessary to go into details as to the amount of competition that our apples have in the American markets alone, or what the quality of the competing apple is. We all know that it is growing in volume from year to year—that the quality of the barrel apple is getting better, and that many sections of the East are beginning to pack their apples like we do, in boxes.

It is a fundamental principle in any business that volume induces competition, and the greater the volume, the sharper the competition is. The whole United States produced something like 275,000 cars of apples this year, for instance, so that every car shipped from the Northwest had to compete with about 26 cars from other sections. That is an item of tonnage worth taking into consideration. But here is where the whole point comes in: The bulk of the apples can be raised for much less than we grow ours for, and of course are sold cheaper at shipping point than we must expect for ours. On the other hand, there are a great many people who can afford to buy only the cheapest apples, and they cannot be too particular about the quality. The majority of the others are satisfied with ordinary quality, providing they can get it at a moderate price. Then there is the class of people who can afford to pay a good price for good quality, but that is the discriminating class, and they are particular enough to expect and exact value received for the price they pay.

That is the class we must cater to to use our apples, and it stands to reason that if we are to get a correct price for them, we must in turn give the consumer the correct quality. If we don't, what is there to justify the freight charge?

We will finally assume that the other box apple districts like Colorado, Utah and New Mexico realize these conditions, and that in order to establish and hold their trade in the apple barrel districts, they are going to strive to the utmost for quality. In that case alone does it not compel us to produce better quality than they can, in order to overcome the difference in the freight rates which are lower from their districts than from the Northwest? All things being equal in quality, they have the best of the argument in the box apple business, unless we make up our minds to put something better than they can, in every box we ship.

Admitting that situation, the whole thing really gets down to a proper conception of what the barrel competition means, because that represents the great percentage of the country's crops:

The average selling price of the Eastern apple is approximately $1.50 a barrel at its shipping point, and there appears to be a profit at that figure, or they wouldn't stay in the business. It costs us 50 cents a box to ship our apples to the average market, which is equal to $1.50 a barrel, or what the Eastern barrel sells for at shipping point. Therefore, if we are able to produce a packed box of apples for 50 cents, that is only one-half the cost of laying it down in the Eastern markets, because the freight cost is 50 cents a box additional. In other words, in order to get merely the cost of production for our fruits in the average market, we must sell for at least twice what the barrel apples can sell for at a profit. The cost of production in the Northwest, therefore, must always be recognized as including the cost of transportation of 50 cents a box, in order to equalize the first selling price of the Eastern apple. All of this means that we have got to put not less than 50 cents worth of quality in our boxes to merely sell as well as the barrel does. Our profits will then be regulated by the extra measure of quality we put in. That seems perfectly clear.

This brings us down to how we are going to insure a uniform and dependable quality in our boxes. There are clearly two ways to do that. One is the adoption of a practical set of grading rules that will be recognized as a standard for the whole Northwest. The other is a rigidly correct, invariable and reliable application of them. The former is perhaps the more difficult of the two to bring about. It is true that uniform rules are in use between the members of the Exchange system in the Northwest, but as far as all districts and growers' unions are concerned, there has not been up to this time, any cooperative movement or effort in a broad way, to bring about a definiteness of understanding and purpose. There is perhaps a reason for this, and it should be analyzed:

We all know that few of the growing districts in the Northwest have the same natural characteristics, in the way of soils, climate, elevation and other features that have direct bearing upon the specific nature of their products. It is reasonable, therefore, that a wide variation exists in the quality, color and other physical features of the fruit itself. Many of these differences are trivial; others are more pronounced, and extremes are frequently met with that are so radical as to make the variety almost unrecognizable as compared with the same varieties from other sections.

There is much to be said also, and it must be expressed without fear or favor, namely, that there is a material difference in the general quality and physical value of the Northwest apple, according to the locality where produced. Local pride is seldom willing to concede this fact, each section claiming superiority over the others. Hence a reasonable excuse might be offered in defense of a disinclination to work together on matters seeking to co-ordinate the various districts towards a general conception of physical conditions. Whatever these various conditions and established ideas may be, it is certain that we must use some fixed standard for a basis, not merely for argument at meetings of this kind, but as a definitely understood factor around which we can construct and maintain a set of grading rules that will be at once permanent, and at the same time accepted by the markets as strictly dependable year after year.

We have seen that the apple industry in the Northwest made its great strides in planted acreage and horticultural application because of the distinctive quality that we positively can, but do not always produce. That quality is based upon the maximum elements of the apple in physical construction as to type, size, style, smoothness, color, brilliancy and general attractiveness; freedom from disease, blemishes and defects, and included with this make-up, must not be lacking the maximum ability of the apple to stand up under shipping or storage commensurate with its natural habits.

That is, in short, what our so called Extra Fancy grade is supposed to represent, and it should of course be made the basis for the lesser grades.

The principal questions to take up in connection with the subject of a fixed grade basis are two in number:

First—What features must our apples possess in order to successfully compete against the product of other box apple sections and the barrel apple?

The answer to this is perfectly obvious. They must include correct physical quality, color and size. If they lack in either respect, or are at variance with trade demands or requirements, they are clearly unfit to compete against the great tonnage of the remainder of the country.

Second—Can we uniformly grow apples of the distinctive quality mentioned, year after year? I think not. There are so many factors to consider in the way of climatic conditions, alone, that we may well come to a prompt realization of the fact that our apples are not, and cannot be expected to be, exactly uniform in character every year. In the average of seasons we might safely depend upon a certain relative combination of physical quality, color and size, by utilizing to the utmost of our knowledge of, and skill in, horticultural practices, but that is about as far as we can go. Granting this is the case, as events are clearly demonstrating to us each season, we must determine whether the local conditions as they vary, should be the governing factors in shaping our grading rules annually or if we should not make the basis definite, and stand by them regardless of each season's conditions as they prove themselves.

In this final proposition, let us bear in mind once more that if we expect to get a correct price for our apples, they must be exactly as they are represented to be; that they must carry within themselves certain elements of physical quality, color and size, that the competing apples do not have; otherwise we need not expect to get any premiums over them. Lastly, if we expect to establish our products in the market as a staple, we must put up a product so stable in its inside and outside make-up that the trade will readily and automatically call for it with complete confidence in what to expect. That is where uniform quality shows its necessity, and how it can be effectively regulated by a permanent and universal basis of grading rules. I ask the question, therefore, whether or not it is a desirable thing to consider?

In dealing with this entire subject, we must have nothing but the welfare and the advancement of the industry in view. There is no occasion to hide the naked truth. We can raise apples, the quality and superiority of which are not to be questioned; to perpetuate that quality, and appply the principles of practical cooperation which have as much to do with the physical structure of the fruit and the standardization of grades as any other factor, is to place the industry upon a basis that cannot be doubted as to its profitable future. It is self-evident that we cannot afford to raise fruit and sell it at approximately barrel prices in the markets. It is a sure thing that the moment we ignore the essential requirements of the trade, and offer them indifferent quality, lack of color and size, we are becoming unconscious of danger and that is invariably an index to disintegration.

We have spoken of competition: One thing, the most vital of all we omitted to mention, and that is the greatest competition which the Northwest apple has, is the inferior fruit that we ourselves ship of indiscriminate varieties, grades and sizes of minus fair to poor quality. That is not the kind of fruit that is going to perpetuate our industry here. Not for a single moment. We must not ship fruit of varieties, grades or sizes that is not better than the product we are required to compete against. The more of that sort of thing we do, the quicker we are going to lose our reputation as producers of first class stuff. The ideal reputation that we must make is one of confidence on part of the buyer. The moment he is willing to bank upon our reliability that box for box inspection before acceptance is unnecessary, then our reputation is made and it is strictly up to us to live up to it. Poor grades and pack that enforce examination under a microscope are clearly the antidote to confidence on part of the trade. Now it is true that our inferior fruit might bring a slightly higher relative price than the barrel apple because of the more convenient package that the box offers, or because of the wrapper and the label, but in the final results we will find that if we do manage to get the cost of production, we will not get enough more to sell it at a profit.

We must therefore specialize in varieties as in everything else. We must forget the rank and file of ordinary varieties (especially the rank ones) that can be grown in any or every other section in the remainder of the country, and specialize on those that we have demonstrated our ability to grow to a state of superior advantage. Let each district specialize on the particular varieties that are best adapted to its local conditions, regardless of what the other sections of the Northwest are doing. Eliminate the other trees. If they are not profitable, I would like to ask what excuse we can possibly offer why we should continue to cultivate and care for those trees merely to act as detrimental factors to the better varieties.

A word or two about sizes: Once in a while we find that the country is hungry for small apples, but that is only when the crops are short in other sections. That seldom happens. When the trade don't want small apples, and we try to force them on the markets, what is the result? We simply put them into competition with the larger sizes, and shoot holes in the general values of our crops; the large ones pay the penalty for being connected with the small ones. When the general crops are large, the small apple from the Northwest is distinctively out of its element. The trade then don't want them; they want big apples that is very positive. There is nothing else to it.

Knowing that to be the case, why do we raise so many small sizes? Will anyone here dispute the fact that small apples, I mean smaller than 150s, are actually and relatively getting more plentiful each year? Whether this can be remedied by greater care in cultivating, pruning and thinning, I am not here to say. We know, of course, that natural conditions are sometimes responsible, but as an average situation they are not. This is worth a great deal of thought. It is morally certain, however, that small sizes in a general way are destructive to values, and in the progress of our industry, must be eliminated. A fixed grading rule is perhaps the best sorter of that fruit, if they are allowed to grow.

The final and most dangerous competition is either the wilful or neglectful departure from the grading rules. That is the most destructive agency of all in killing the confidence and good will of the trade, and it should be stopped at all hazards. This can be easily remedied if we go at it right, so can quality, color and size. The way to do it is to establish permanent grades and make them practical, clear and correct; put only the right kind of fruit in the boxes, and run the rest through the cider mill or the evaporator. That is all. Uniformity and system will carry our industry through if we get down to brass tacks, and keep our mind on a few definite things, not forgetting the freight cost.

Election of Officers Being Next in Order.

Mr. E. C. Roberts said: Mr. President—Having served for the past four years as a member of the exhibits committee of the Oregon State Horticultural Society, I believe that I am in a position to know something of the trials of the society in interesting the growers and securing exhibits from the different sections of this State.

In years past the great bulk of the fruit placed on exhibition has come from the Hood River and Mosier districts. These have been supplemented by a very few small displays from southern and western Oregon.

Knowing these difficulties and the meager displays from the various fruit growing districts, my surprise upon entering the Northwest Land Products Show this morning can best be expressed by the story of the Dutchman who was going to make a journey by steamboat. The Dutchman had packed his grip and started for the boat landing, when he met a friend who stopped him to give him a message to a mutual friend in the town where he was going to visit. The friend was so long giving his message that the whistle sounded the signal to pull in the gang plank before the Dutchman could get loose. Grabbing his grip in one hand and his hat in the other, he started down the street under full steam; the bystanders shouting "Jump, Uncle, jump!" With a mighty effort the Dutchman jumped and with the help of the willing deck-hands, landed safely on the deck of the receding boat. Almost exhausted, perspiration streaming from every pore, he placed his grip on the deck, took out his bandana and moped his face. By this time the boat had reached the middle of the stream, the Dutchman happening to glance at the then distant wharf, in consternation exclaimed—"Py yemany vat a yump I made!"

When I saw the splendid exhibit of the Land Product Show, I could not refrain from exclaiming "Vat a yump we've made."

Heretofore, the spectator has said—"Why don't they call it a Hood River Show; there's nothing here but Hood River."

Gentlemen, we made no mistake in the selection of a president last year. We elected a man who believes that Oregon has other great resources than her fruit, a man whose vision reaches out and sees that the greatest good that the State Horticultural Society can possibly do for its members and for fruit growers generally and the State at large, is to show the prospective settler the splendid and varied resources and products of our State. A man, gentlemen, whose broad business experience and force of character, enables him to reach the great business enterprises of our State, who has gone out and enlisted not only every county, save one, of our own State, but British Columbia and the states of Washington and Idaho have sent their splendid exhibits to swell the triumphs of the first Land Products Show of the Pacific Northwest.

This man, gentlemen, by his progressive policies and splendid executive ability and untiring energy, has been able to enlist the cooperation of great railroad and other interests, not only in the giving of special premiums and awards, but in solid financial and moral support as witnessed by today's spectacular parade participated in by more than one thousand officials and employes of the Harriman Lines in Oregon, one of our great railroad systems, as an aid in advertising the first Land Products Show of the Pacific Northwest.

To this man, gentlemen, we owe the honor of re-election to the office of president of the Oregon State Horticultural Society, and it gives me great pleasure to place in nomination for president for the ensuing year, Mr. A. P. Bateham of Mosier, Oregon.

Mr. H. B. Miller: Without any thought of detracting from the excellent work which has been done by the Horticultural Society, railroad people and others who have put up large sums of money to make the land show a success, in my mind the State Horticultural Society should stand for something else than a land show. I think it is a good thing to have a land show, and a good thing to have the Horticultural Society affiliated with it, but not for the society to be absorbed by the land show. I think we ought to have our own apple show, and let the railroads have the land show. I don't think we ought to elect as our president any member of the society simply in order to conduct a land show. Now we have with us a man here who knows how to conduct a fruit display that will do credit to this society. He is no stranger to us, and we all know and revere him. He is a man of many years experience, and he has been connected with our shows and displays before, and knows how to get them up in a pleasing and artistic manner. But we must not forget that we have more than our apples and pears to think about; we have our berries and our prunes, and our cherries, and we ought to show our walnuts, and everything we raise in the way of big and large fruits, and flowers, and we could have a flower show in connection with our fruit show that we members of this society would be proud of. I repeat that the man whom I have the honor to mention knows them all, fruits and flowers, by varieties and by their characteristics and possibilities; but he is also capable of, and can make a specialty of experimenting with new and novel varieties of fruits, so that we may know what we can raise upon our large number of different soils, and under our different climatic and other conditions. I speak for a man who will advance the progress and the plane of fruit growing in Oregon; one who will by his office in the chair speak and act for every member of this society and every citizen who is now, or may later become interested in our varied forms of horticulture. Mr. Chairman, it gives me extreme pleasure to place in nomination for the high office of President, Mr. Henry E. Dosch.

Mr. C. A. Malboeuf said: Mr. President—I do not want to disparage for a moment the very complimentary remarks which Mr. Miller has made in regard to the qualifications that we all recognize in Mr. Dosch, nor as to his unquestioned ability in the horticultural field. But this is not a matter where the issue is personality, nor one that invites individual comparison between a man who has, so the speaker intimates, submerged the horticultural interests of the State into a general land products show—and a man who is said to know how to conduct an exclusive apple show. We are not here, as I take it, to elect men simply because of their peculiar fitness to run some special kind of a show successfully. This society is sponsor for the fruit and other interests of Oregon. The fruit industry has suddenly reached a stage of tremendous volume; the investment in orchards in this State, amounting to close to seventy-five million dollars is at stake. The industry today rests upon a balance wheel, the slightest movement of which means either progress or retrogression. This is a business proposition, Mr. Chairman, stern business, that calls for backbone, ability, broad vision and leadership, to carry us through, and nothing else will do it. It has been admitted on this floor that our president possesses all those qualifications; he is a practical experienced man who knows the fruit business from selecting the soil and the tree types to the marketing end, with the faculty of getting the confidence and the support of the great financial interests of Oregon. He has made good you say; then what are you going to do about it? Acknowledge the man, but elect someone else? Mr. Miller says we need a president who will experiment with new varieties of fruits. Experiment! Have we not been experimenting in apples and pears and other fruits for twenty years, and what is the result? We are growing nearly five times as many apple varieties as are fit to be represented in the list of specialties that have given the fruit industry out here a world-wide reputation. Specialty and improvement is what we need; not more experimenting. The agricultural display at our Land Products Show has been criticised because it was not confined to fruits. Don't we all know that the purposes of this society, as its charter clearly states, deal with the interests of agriculture to the same extent as they do to horticulture? Those purposes impose stern obligations upon the society that we cannot evade by mere flourishes of the land. The Land Products Show is an exponent of what the society stands for, and the society has taken a long step forward in holding it under its auspices. I think we forget these facts if we think that our horticultural toes have been tramped upon. I repeat that this is not a matter for sentiment or personality, but a business issue of intense seriousness. We need leadership, and we have it in a most forcible type in the person of our president. The policy of the society today is clearly one of definite business method and progress. I appeal to you gentlemen to sustain that policy. I second the nomination of Mr. Bateham.

Nominations were then closed and ballot taken. Result of election: Mr. Bateham 58; Mr. Dosch 17.

Mr. Dosch congratulated the society upon the re-election of Mr. Bateham. Moved that the election of Mr. Bateham be made unanimous. Carried.

Mr. Dosch nominated Mr. E. H. Shepard for vice-president. Mr. Shepard withdraws from nomination for vice-presidency.

Mr. Roberts nominated Mr. H. B. Miller. Mr. Dosch moved to cast a unanimous ballot for Mr. Miller, which was done.

Mr. E. H. Shepard nominated Mr. F. W. Power for secretary-treasurer. Nominations closed and unanimous ballot cast for Mr. Power.

Mr. J. O. Holt, of Eugene, Mr. C. A. Park of Salem and Mr. Albert Brownell of Portland were the three men nominated for trustees from which number the Governor is to appoint one as trustee for three years.

Prof. Lewis took charge of the meeting for the remainder of the afternoon and the time was occupied by a competitive Speaking

Contest for students of the Oregon Agricultural College. The six young men entering the contest were selected from nineteen who competed for this work at the Agricultural College.

The result of the voting by the audience was as follows:

1st. Harry Hetzel; Cooperation.
2d. C. L. Hill; Diversified Fruit Growing.
3d. R. M. Rutledge; Cooperative Canneries.
4th. F. M. Harrington; Keeping Up Our Reputation.
5th. R. E. Miller; Orchard Management.
6th. J. R. Magness; The East and the West.

Four prizes were given to the four highest in the contest, of $50, $25, $15, and $10, respectively.

Announcement was made of the names of the students who won the prizes offered by the Land Products Show. Fifty dollars was divided between the two sections of identification of varieties and judging of plate exhibits. In each case the first prize was to be $12.00; second $8.00, and third $5.00. The winners of these prizes are as follows:

On Plate Exhibits—First, M. M. Winslow. Second, R. A. Blanchard. R. C. Rutledge and C. V. Lewis tied for third place.

In the identification contest Mr. L. M. Bernstein won first place, R. A. Blanchard second, and B. C. Cooper third.

COOPERATION.

Harry C. Hetzel, Corvallis.

During the past summer I had the pleasure of meeting many of you gentlemen who are here today. I had the opportunity of visiting prarctically all of the fruit sections of the State and talking to the fruit growers themselves, talking to them in regard to their methods and the results of their actual experiences.

My work demanded that I ask many questions, and I believe that most of you whom I had occasion to meet will agree with me that "many" is perfectly right. One of these questions was this: "What are your biggest problems in fruit growing?". I find that the horticulturist of today has all kinds of troubles. There is always some new "fandangoed" bug or big named fungous coming along, or the frost appears too soon or it rains too much, but after all of these numerous troubles had been related in as many different ways, the answer to my question by about nine-tenths of the fruit growers resolved itself into something like this: "We have any number of troubles but I'll tell you the biggest problem that I've got to deal with or any of us have to deal with is the problem of selling our fruit."

We are not the first people to face this problem. It comes to every country as soon as they pass the pioneer stage, as soon as people cease to be self sufficing, as soon as they cease producing everything that they require and begin to raise only that which they are best fitted to produce. The more thickly settled a country becomes the more prominent does this question appear. So it is that the countries of Europe, with their limited land and their millions of people have been obliged to meet and solve this problem, before we with our vast acreage of unoccupied land and our wealth of opportunities have passed the pioneer stage, before we have come to realize the bigness of this question.

There may be more than one way of solving this problem but if there is, the countries of Europe with all of their many years of experience, with all of their loss and suffering have failed to find it. They were confronted by the question at different times and in different ways—they spoke a different language and each worked out their own salvation. Some have failed or are still struggling as we are today, but when we look into the history of those countries which have succeeded we find that they have all solved it in just one way and that way is by cooperation.

I realize, gentlemen, that cooperation is not new to you. You have heard speeches on this subject time and time again, and have had the arguments presented in a thousand different ways. But I do say that the very fact that you as fruit growers admit that the biggest problem that you have to solve is the problem of selling your fruit—that experience in Europe goes to show that there is only one way of solving it—the fact that the fruit growing regions are competing with one another in our markets—the fact that you can count the real live, permanent fruit growers associations in this State on the fingers of one hand, and that you can find hundreds of men in our most noted fruit regions who are still attempting to sell their fruit as individuals in the old pioneer fashion is justification enough for a speech on cooperation if it is as old as the hills, enough for a hundred speeches per month in every county in the State.

Nor do I intend to spend my time showing why you should cooperate, or attempt to present all of the numerous arguments in favor of cooperation. The arguments in its favor are indisputable. They are self evident. I don't believe I could get into a debate with a man in this audience on the principles underlying cooperation. We all know that in theory twenty men are stronger than one. What you ask every time this subject is presented is simply this—"Is it practicable?" "Is it more than a theory?" You say and you are right about it—"Before I'll put my money and my time and my trust into any big cooperative plan you will have to show me actual results. I don't want theory, I want results!" That is the kind of an answer a farmer will give you every time, and it is from this point of view that I wish to take up this topic today.

Is it a theory? It would be hard to call the Wholesale Society of northern England a theory. This powerful organization was started sixty-nine years ago. Six poor weavers were the original shareholders and directors, and twenty-eight pounds was the capital invested. They began doing business on a cooperative plan with three sacks of sugar and one hundred pounds of sugarm.

Today the capital stock is nineteen million pounds. There are thirteen hundred affiliated stores. The receipts during the last thirty-five years have amounted to eighty-four million pounds. It is the greatest business concern in the world. It does four times the business of the American Steel Trust. There are factories for the manufacture of food and clothing, plantations for the growing of crops, depots in the biggest markets in England, and agents in the principle cities all over the world. It is all carried on according to the original cooperative plan and the profits obtained go back to the eight million people who purchase goods in the thirteen hundred village cooperative stores.

It makes no difference whether we are buying or selling. The principles of cooperation are just the same. I wish I had the time to trace the movement in the other European countries. All have their lessons and their interesting results.

Denmark has shown exceptional development. A century ago this little country with their ten million acres was the most poverty stricken country of Europe, a land of waste and sand dunes. Today, America and England are constantly sending representatives to Denmark to find out how to farm. With a population of two and one half millions these people ship out every year food products to the value of ninety million dollars. Eighty-nine families out of every hundred own their own farms. Rider Haggard who has made an extensive study of Danish methods makes the following statement: "Whatever else may be doubtful or open to argument in connection with Danish agriculture, one thing remains clear, namely, that it owes the greater part of such prosperity as it possesses to the working of the cooperative movement."

Prarctically every farmer in Denmark belongs to some cooperative association. There are ninteen thousand registered agricultural cooperative societies in Germany, about the same number in France, two thousand in Belgium, seven thousand in Austria Hungary, and several hundred in both Finland and Siberia.

We also find examples of success in our own country. You are all more or less familiar with the Citrus Exchange of California. At the present time this organization handles from sixty-five to seventy-five per cent of the citrus products of California of fifty thousand cars a year, the total business amounting to approximately twenty-five million dollars per year. The final organization as it exists today was brought about in 1904. The four years from 1904 to 1908 show an increase over the four years just previous amounting to fifty-four per cent in the amount of fruit sold and one hundred and eighteen per cent in the receipts. They have their own legal department and their own claims department. They have forced a reduction of railroad rates for their fruit. They have been the greatest factor in preventing the lowering of the tariff on oranges and lemons. Their insurance company saves thousands of dollars for the members every year. In a single year their Supply Company supplied members with nine million boxes, amounting to eighteen hundred carloads of lumber, twenty carloads of nails, and one hundred and twenty carloads of tissue paper for wrapping their fruit. By means of their agents and their complete organization they know exact market conditions, and are able to sell to the best possible advantage.

The California Fruit Exchange which deals only with deciduous fruits is making wonderful progress. In 1910 the gross receipts amounted to $1,501,000. They have the same agents as the Citrus Exchange and are closely affiliated with it.

I wish I had time to give figures showing the development in other parts of our country. The army and navy have started a cooperative store movement, and the railroad men of New England have followed their example. The truck growers of southern Texas have a very successful association. Monmouth County Farmer's Exchange are doing big business in Massachusetts. Minnesota and Wisconsin have several hundred cooperative creameries and stores.

All of these instances and many more which might well be cited simply go to show the one point which I am attempting to bring out, namely, that cooperation is no longer a lot of arm chair philosophy or a poets dream but an actual, live, practical powerful force which is giving the farmers and fruit growers in parts of our own country and in many foreign countries the profits and rights that they deserve.

Cooperation is not only right in theory but it is right in practice. The only question that arises is this—"Does it apply to Oregon?" Why, Ladies and Gentlemen, you might just as well ask—"Do we have any rain in Oregon?" You know from your own personal experience that every year that we sell our fruit with our present loose, unorganized methods, we lose thousands of dollars simply because of a lot of useless competition in our markets. Furthermore, did you ever stop to figure out the difference between the price you receive for your apples and the price paid by the consumer. The Secretary of Agriculture in his report for 1910 points out the fact that this often amounts to as much as 80 per cent in box apples. Did you ever stop to figure out the actual expense of producing the boxes and ladders and material that we use in our orchards? Gentlemen, if you didn't need cooperation and need it badly, you wouldn't say that your biggest problem was the selling of your fruit.

If we could only come together in one big cooperative association we too could have our stores, and our factories, and our legal and advertising departments. We too could have our agents and our depots. We to could get the profits which we rightfully deserve.

DIVERSIFIED FRUIT GROWING.

By C. L. Hill.

The proverbial injunction against carrying all your eggs in one basket applies to a great many Oregon fruit growers. The Hood River Spitzenbergs have become famous all over the world and growers all over the State have been planting Spitzenbergs without a thorough study of their conditions or the assurance that their soils were adapted to the growing of extra fancy fruit. Too often disastrous failures have resulted from this policy and lands which would have yielded good profits if planted in other fruits have become great sink holes for the money of "Would be Spitz King."

The growing of Extra Fancy Spitz is an enterprise in which only a chosen few can engage and the great majority of the fruit growers of the State would do better to be content with reasonable profits in other fruits than to attempt to engage in what is in many sections a gamble. Oregon has become famous for a few fruits and the growing of other profitable fruits has been neglected and in the future the money will be made by the man who sees these openings and reaches out and grasps Opportunity by the forelock.

In no other state are there such opportunities for the growing of cherries or Italian prunes. Much of the land west of the Cascades and in the Willamette Valley is suited to the growing of English walnuts and in many vallies of eastern and southern Oregon filberts and almonds can be grown to advantage. Peaches and pears offer splendid inducements in the Rogue River Valley and European grapes can be grown there or at The Dalles. The region west of the Cascades is ideally suited to the growing of small fruits and along the coast cranberries can be grown. Strawberry culture is profitable in nearly all our fruit sections and there is hardly a medium sized city in the State that is well supplied with vegetables even at the height of the local marketing season.

There is not an acre in the State which will raise nothing but Spitzenbergs but there are many thousand acres that will raise profitable crops of other fruits but which wouldn't raise a Spitz you could give away. Experience has shown that where one variety is planted to the exclusion of others it is carried to an extreme and a revulsion is sure to follow. Oregon must learn that mixed industries are best for any community and must begin to develop her hitherto slighted industries.

As it is with the State so it is with the individual and his farm. Agricultural economics tells us, "The economic well-being of the farmer depends upon his capacity to select and produce that crop or combination of crops which will year after year return him the highest net profit."

With this in mind look over your situation. If you are one of the chosen few who can grow Spitzenbergs successfully, year after year, grow them. If not, look out for the fruit or combination of fruits you can grow.

Every one of you have seen frost, pests or the natural biennial bearing habit seriously decrease or destroy one fruit while another fruit may have yielded a bumper crop and the farmer who planted two fruits or at least two varieties reap the reward for his forethought.

The farmer who has a series of crops demanding his attention at alternate times can keep his machinery and live stock busy, pay his expenses as he goes along and keep his money in continual circulation instead of drawing it all in a lump and letting it lie idle the great part of the time. The successful merchant is the one who keeps his money in continuous circulation, turning his capital into goods and quickly back again into cash to be reinvested. Why should not this principle apply to the fruitgrower as well as to the merchant? Why should he put all his money into high priced land, machinery and live stock for the production of only one crop a year, allowing his capital to lie without interest for a great part of the time.

If the fruitgrower has a series of crops he can hire better labor and keep it steadily employed instead of hiring hobo labor for two weeks or a month at a time. I worked this summer on an orchard where the work started with apple thinning and ran through the handling of cherries, apricots, peaches, pears, almonds and apples, making an almost continuous season and permitting the hiring of a steady force of men with more convenience and more skilled labor. A neighboring orchard hired only for the picking season and for a month had a continuous job of hiring and firing, with attendant loss of time, not to mention bedding and other moveable property.

Not least among the benefits of diversification is the effect it would have in relieving the congestion of Eastern markets. With the increase of fruit growing in the East the marketing of our apples is becoming a serious problem. Our market will soon be practically limited to that for extra fancy fruit and it behooves us to seek new markets or to seek fruit which will have practically a monopoly of the market.

Many acres of our land would do better in cherries, pears, prunes, or small fruit than in poor quality apples which glut the market, pull down the prices and injure the reputation of our really fine apples. The keynote of the fruit industry is diversification or individuality. The grower should strive to have something or to do something that his competitors do not do. We must remember that there is room at the sides as well as at the top and that what we call the best is really the "unlike."

The day when a grower can realize a king's ransom from an acre of apples is fast drawing to a close, our inflated land values are declining and the industry is coming into the hands of men of small capital who cannot gamble on the market but who are content with reasonable profits such as are derived from other industries. They may not all be millionaires but they should certainly not overrun the poor-house as long as our land will yield profits of $50 to $500 per acre for intelligent farming.

There is not a section in the State where there are not at least five fruits that will grow to advantage. Where such conditions exist the largest profits with the least capital and the largest interest on the capital invested can be realized by diversification, by using more than one basket for your eggs. The Milton-Freewater district is perhaps the most uniformly prosperous district in the State and is also the one where the fruit industry is most diversified. There are raised apples, peaches, pears, prunes, small fruits and truck, all yielding a comfortable income to the grower. The profits may not be as large as are sometimes realized in other sections but throughout the section and year after year the average is better.

By no means would I advise every grower to plant small blocks of a dozen different fruits. That would be as foolish as to plant a large acreage of Spitz simply because they are grown to advantage in Hood River. Every 40-acre orchard should have at least four varieties, not only for interpollination but to prevent a total crop failure and to return the largest profits.

Look at the proposition sanely and from a purely business point of view. Can you afford to grow Spitzenbergs at $1 per box? Is not there some other fruit you can grow better? Thirty states can grow good apples, only two or three can grow Italian prunes or walnuts and Oregon stands preeminent in the opportunities for growing cherries, pears, loganberries and evergreen blackberries. The loganberry industry alone could be made worth $10,000,000 in ten years. Why the attempt to specialize on Spitzenbergs, Yellow Newtowns or Bartlett pears which can be grown almost equally well in other sections?

Every one of you, whether already a successful grower or think of planting should make a careful study of your soil, climatic and market conditions. See if your fruit is bringing you the highest annual profit possible and if you are utilizing your land, machinery and livestock to the best possible advantage. If not, study all the varieties of fruit adapted to your section, their fruiting and marketing periods, and pick out a combination that will suit your land and markets, give you the best opportunities for continued labor and return the best profits.

This would result in widespread diversification throughout the State, would enable Oregon to develope markets for fruit on which she has, if not a monopoly, at least a fair chance and to maintain her markets for her extra fancy fruit. It would encourage the back to the farm movement and the small grower and would make Oregon preeminently a state of thrifty, progressive, prosperous farmers, the foundation on which any community or nation must rest.

(Speech delivered by C. L. Hill before the State Horticultural Society, November 21, 1912.)

THE COOPERATIVE CANNERY.

R. M. Rutledge.

The great problem before the fruit and vegetable growers of Oregon is not so much to produce larger crops, but rather to obtain larger profits on what they now produce. This becomes a vital need when we realize that, in the case of apples, 30 per cent of the crop in the Northwest is orchard run or poorer; when we remember that 30 per cent is of so poor a grade that it does not pay to pack them; in other words, practically 30 per cent of our crop is practically a dead loss. As far as our pocket-book is concerned we might just as well pack up one-third of our crop of apples, bring them to Portland and toss them into the river. Similar figures apply to each of our crops.

This problem is not peculiar to the fruitgrower, but has been faced in every branch of business. In some industries it has been solved. For instance, it is said that the entire profits of the Union Stock Yards of Chicago are made from materials which 15 years ago were cast aside as waste. Competition long ago forced the pork-packer to use his waste products—everything but the squeal; this same competition has begun, forcing the fruit and vegetable grower to use his windfalls, culls, overripe produce. In fact to make the same large profits that the hog-packer does we must learn to use everything but the worm hole. In a few districts the solution of this problem has taken definite form and the cooperative cannery has been the result.

Judging by the trend of discussion before the various fruit growers' associations throughout the Northwest, there are three ways by which we may obtain greater profits on what we now produce. First, we must enlarge our market by providing wider distribution; second, we must provide a longer period of consumption; and third, we must realize profit on our waste.

Growers here and there throughout the Northwest long ago began to feel this need of increasing their profits and organized themselves for more economical marketing. Through these associations they have widened the market for our produce by maintaining selling agencies in distant markets and by assembling their produce and shipping in the refrigerator car. But this has proved neither cheap enough nor efficient for practical use with many of our vegetables, berries and low grade fruits. Our second difficulty—that of a longer period of selling and consumption—has caused the erection of great cold storage plants. But the cost of cold storage is often prohibitory. In the case of apples this is never less than 5 cents per box per month or 15 cents per barrel for each month of storage. However, only occasionally do we find a community of growers who have provided for the use of their waste and thereby met our third and, some claim, our greatest problem. In Corvallis we have a successful cannery managed and owned by the growers of the district. Similar examples of success in this line are to be found elsewhere, notably in Puyallup, Washington, but the Corvallis plant stands as a unique example of what may be done with very small capital towards solving all three of these problems.

Last spring there was a unanimous feeling among the Benton County growers that they were not making all the profits that they should; that while they received good pay for their first grade fruit and vegetables, nevertheless, a large part of the crop unavoidably became over-ripe or ran to culls; and that there were times when even their first class produce fell upon a dead market.

To meet these conditions the Corvallis Cooperative Cannery was established. 423 growers agreed to supply a capital stock of $1 each, to furnish all their fruit and vegetables to the cannery, and to wait 90 days for their returns. This produce was to be either canned or shipped fresh, depending upon the condition of the market. This association has in its first year shipped several cars of fresh fruits and canned 12 cars of fruits and vegetables. The growers received an average net profit of 25 per cent more than they would have had they sold upon the open market. For instance, this year one pear orchard in the Willamette Valley netted $7,500 from its crop from 36 acres. By selling to the cannery this orchard bought no boxes nor lithograph, hired no packers, and paid no freight.

Furthermore, the growers marketed much that without the cannery would have rotted on the ground. For instance, all of you know how hard the prune growers were hit this year by the rains during picking time, which split the fruit and beat it from the trees. The cannery took every split prune offered; and I have known growers who actually dug prunes out of the mud with their fingers—prunes which were so badly cracked that the stones were dropping out—and when they were properly cleaned and canned netted the growers 2-3 of a cent a pound.

The cannery took care of the apples, pears, cherries, strawberries, blackberries, loganberries, etc., that have formerly been wasted or at best have sold at prices that offered no real temptation to take them to the consumer. The cannery also handled all the vegetables offered. It put up $6,000 worth of beans, and from this crop some farmers cleared more than $200 an acre from land that had never before produced anywhere near $100. And all this was done on a capital stock of $423! The confidence among the growers may be seen by the fact that, in place of the $423 which they ventured last spring, two weeks ago they voted $8,000 for building a new warehouse, remodeling the cannery and buying improved machinery.

The condition which made this cannery a vital need and insured its success are not local—they are not peculiar to Benton County, but probably are duplicated in every fruit and vegetable district in the Northwest. A few other communities have obtained equally gratifying results; others are rapidly following their example. And wherever the cooperative by-products plant has been given a fair trial, the growers have solved our three problems. Their produce goes on the market in a compact form—it reaches the most distant markets at low freight rates. Through the canning process they have made perishable products practically imperishable—they can sell their fruits and vegetables every day in the year. Their surplus is stored in the tin can, their culls are worked over into a profitable form—they have eliminated waste.

In addition to all this, these plants amount to profit insurance. If the market is over-stocked—we can our fruit. If our fruit is over-ripe, and will neither keep nor ship—we can it. If our crop runs to culls—we can our culls also and we have profit in place of waste. By so doing we have insured our profits.

Gentlemen: My argument is simply this—the use of the Cooperative Cannery will first enlarge our market by permitting inexpensive transportation; second, it will allow us to sell our produce every day in the year; and last but not least, it will return profit on what is now mere waste. We have this proposition before us; we insure our homes and our lives: it is just as desirable to insure our means of living.

KEEPING UP OUR REPUTATION.

F. M. Harrington, O. A. C.

November 21, 1912.

A successful business demands one main essential—a reputation and it is towards this reputation that all good business men are working. Of course we all know that there are two types of reputations, a desirable one and an undesirable one and you realize instantly that it is the former to which I am referring.

Let us place the fruit grower of the Northwest in the position of the business man. A fruit grower must be and is a business man, so we are not putting him out of place, but all the people who are attempting to grow fruit cannot be classed as fruit growers in the true sense of the word. Rather they are people who think they are fruit growers and distinctly are not business men. If this is not the case why are so many orchards set out in conditions unsuited for fruit growing; or why are so many varieties of fruit set out which would be suited for some sections but not to the region where this particular orchard happens to be? And why the failure in so many cases.

The fruit of the Northwest has gained a reputation which is the envy of every other fruit section of the United States. The world knows the Oregon apple. It knows the Oregon fruit to be as it is represented—the best fruit that nature can produce, graded properly and put up in good packs. What more can we ask for? We have the reputation. Now comes the question, what are we going to do with it?

As far as fruit conditions in the Northwest are concerned, the next few years are going to show a decided change. The Northwest is a region which has just lately begun to realize what it can do along the fruit line. Our best known fruit territories have been but recently developed—Hood River for example having come to the front during the last ten years, and the same conditions exist in numerous other places as well. No great amounts of fruit, relatively speaking have as yet been produced over the Northwest and the trees concerned in the production of this fruit have been young trees, trees not yet in full bearing. And what, you ask, has been the result of this? The fruit produced has been large, extra large fine fruit, for young trees normally produce large fruit when compared with that fruit produced by older trees, the difference being real marked in many varieties. This fruit has not as yet been produced in such quantities as to make it a serious problem in the handling. With these two factors—extra fine fruit and a crop not as yet large enough to present serious trouble in the handling, it has been a very easy matter to develop the well known apple pack of the Northwest, which is the standard of excellence everywhere, in the old world as well as in the United States.

But conditions are not going to always be the same. Perhaps we may even see a change in some respects this fall. Apple trees are not always going to be young trees. With the increase in age will come an increase in the amount of fruit and a decrease in the size. On an average the fruit will be found to be inferior to what it has been in the past, inferior to the fruit produced on the young trees but still fine fruit. This state of affairs is going to crop up everywhere throughout the Northwest fruit region. And what will such conditions mean? Fruit of a slightly lower grade is going to mean that the fine first class packs of the past cannot be equaled as regularly. Increase in production will mean hurrying to get the fruit picked, packed and on the market. Perhaps the labor will not be sufficient to handle the large crop properly. Carelessness in picking will follow, no special pains will be taken as to grading and the pack resultant will be a pack inferior to what the world expects from us. Our trade accepts the Oregon fruit as it is labeled—if extra fine, it is extra fine. Such is our reputation. But with the changed conditions which are soon due, what will follow? Are the fruit growers going to commence putting up poor packs? And if they do how are these packs to be labeled? A poor pack is a poor pack but if properly labeled, a perfectly legitimate pack. It does not detract from a man's standing if he puts a second grade pack on the market but it does detract if he puts that pack on and labels it first class. It hurts the grower himself, it hurts his neighbor and in fact it places a cloud over the whole community. Notice what an article in the Portland Journal of last Friday evening has to say. It reads, "Most of the apples coming from the Columbia River section and marked extra fancy are no better than the choice from Yakima. This is having a bad effect upon the trade." This article speaks for itself. You can see what is happening.

A large number of land companies have lately been booming the fruit lands of the Northwest. Some of these companies are good legitimate companies but not all. Some of the later kind have put out orchards, not in compliance with horticultural methods but in compliance with what they think will take with their prospective customers. They plant a Spitz because they figure their customers will know that apple and think they are getting a fine orchard. In fact the Spitz may be a very poor apple for that section. But still they plant it. Poor fruit is going to come from a whole lot of these orchards. And of course the owner wants to get rid of his crop. As a result we are going to have a class of fruit on hand which is going to hurt the entire Northwest unless properly handled.

And have you ever heard the fruit pit or the water core of apples mentioned? Every fruit man knows them both. They are an increasing menace. Each one of you, who would have our reputation kept up, just consider these things from a personal standpoint. A person hates to have an apple thrown out because it is not quite perfect and he is inclined, when packing for himself to forget to throw out all such apples. Would you, then, in the interest of the reputation of the entire Northwest, be willing to put your grading and packing into other hands? And again, would you be willing to have all fruit affected with fruit pit and water core thrown out? Such conditions may be necessary if we are to maintain our place in the apple world.

You all can name business concerns which have had fine reputations in the past. Some still maintain these reputations while others have taken a decided drop. These later, after gaining a reputation, begun to depend upon it to carry them, regardless of the goods they handled. They are soon found out and fall from grace, and having fallen, it is the next thing to impossible to regain confidence again.

Other sections of the United States have had reputations in the past for putting out good fruit. Take the case of the apples of Michigan. Michigan once had a high reputation for its fruits. What has happened there? Michigan men began to depend entirely upon this reputation to carry them along, regardless of the kind of fruit they furnished. Michigann's reputation is entirely gone as a result.

And now it is up to the Northwest. Are the fruit men of this section going to imitate other sections or businesses to the extent that henceforth the reputation of the Northwest apple will carry them along for a few years regardless of the kind of apple handled? And it will be but a few years. Just bear in mind the immense area in which apples can be grown. And are the Pacific Northwest States going to follow in Michigan's footsteps and let our reputation of handling the very best of fruit drop? Or, rather, are the fruit growers here going to come through and meet the new conditions as they should be met and keep the fruit of the Northwest up to standard? It is in the hands of every fruit man. What will he do about it?

ECONOMICS OF ORCHARD MANAGEMENT.

By R. E. Miller.

In treating on Economics of Orchard Management I shall endeavor to present a few of the distinct advantages to be gained by keeping a concrete and systematic record of your orchard. This phase of economics is the science that treats of the value of orchards to man measured in dollars and cents. Men are keenly interested in the details of any enterprise that directly affects their purses. Let us then consider a few of the questions relating to this subject.

How many of you have kept accurate records showing that your Spitzenbergs are making more than your Newtowns. How many of you know whether the Anjou, the Bartlett, or the Comice is bringing you the highest net profit? How many of you can show detailed information regarding your spraying, cultivating, etc. Do you know if you are figuring the net increase in your yearly profits, in dollars and cents or in the production of wood. Most orchardists admire the green leaves and the new wood growth, but when it comes to settling accounts it is the fruits that count. Not only do the fruits count, but it is essential to know if they have been produced at a loss or a gain, and if so how much? It is by studying the results of well kept records that one is able to extend or retrench on the different parts of the business, so as to make more money in the future.

While methods have been devised for investigating the soil, the plant, and the animal, little effort has been given to devising ways of studying the general plan of the orchard business. The relation of one part of the orchard to another, and the relation of the orchard to the markets and to other industries have not been brought under scientific investigation.

A systematic study of the orchard consists, first, in the separation in the mind, of the important from the unimportant facts; second, the formation of a mental judgment as to hte relative importance of each and the reason therefore; third, acquiring a clear perception of what essential knowledge is lacking, and finally the acquirement and utilization of that knowledge.

Let us assume that a man has spent ten years in fruit production. Has had ordinary good health, and no serious misfortune and yet has made no headway. If he owed money at the beginning he owes it still. He feels that he has been prudent in expenditures and knows that he has been industrious and yet has not "made good". He now sits down to study his orchard to find out what the trouble is.

The first thing he will require is absolute frankness with himself. If he sets out in his study with the intent to establish the fact that his management is all right he might almost as well not begin. Whether he knows it or not he is about to engage in scientific horticulture and the first teaching of science is to follow truth wherever it leads. If his study convinces him that the orchard is all right but that the error is in the way he has used it he must be prepared to accept the conclusion.

In the first place he will consider what crops he has raised and is now raising, his markets, who will ultimately consume his products; how to get to these consumers, what will it cost to get it there including pay to those necessarily handling it? How is he prepared under existing conditions to endure competition? If he has established the fact that his small profit is not due to the production of inferior fruits his conclusion must be that his crops cost him too much.

The next step is to turn to his own books and examine closely the items of his own costs. If, as will perhaps be the case, he finds there only blank pages, or accounts so kept that he cannot tell accurately the details of the cost of anything, this will then be his main point of attack.

His plan must now be to locate his leakage, that is, find out exactly where the production of his crops are costing him too much, and having found this leakage, so arrange his work that this condition is done away with for good. This can only be done by systematizing his business, and keeping accurate records and accounts. Plans for the orchard must represent and be based upon average conditions and not on any single year. It is surprising to note the extremely low percentage of orchardists that keep exact and detailed records. Out of a survey of Hood River County it was found that less than fifty per cent could show any authentic information. In Jackson County only twenty out of ninety-four places visited, made any attempt to keep records. Ten of these kept complete data. In Douglas County ten out of thirty. What would be the percentage of bankrupts in a city if established business houses kept records like that? You may say you do not have time to do this work. Stop for a moment and investigate the history of those orchards that have been losing money yearly due to poor management. Notice that these same orchards when brought under accurate and systematic management have changed entirely from a losing to a gaining proposition.

It is not necessary to keep a host of books. The entire subject of orchard accounting must be attacked in a new way. The ordinary methods of bookkkeeping will not apply. The orchardist is usually a very busy man. His chief difficulty is neither ignorance nor indolence; he has little time for fancy bookkeeping and still less for "red tape." What he wants is a plain, simple, straight-forward history of his business, so arranged and classified as to require the minimum effort to keep it up. There is no lack of systems of this kind. It is simply a problem of selecting the one that will apply to your conditions.

The man who has once made a study of his orchard will feel such a confidence and assurance in pursuing whatever branch of fruit-growing he may finally decide upon, as he never felt before. He will feel that he is master of his business. Modern competition has invaded the orchard and those only can succeed who are competent to sustain themselves under competition, and those who can live under competition are those who know how to direct effort so that there shall be the least possible waste. This can be done only under a system of accurate records and accounts. It is waste of effort that kills, and it is study that prevents waste.

THE EAST vs. THE WEST.

By J. R. Magness.

We who are interested in the horticultural development of the West are proud of the progress that we have. Whereas, a few years ago, the country was mostly, and indeed, practically entirely devoted to the growing of grain; today fruit is leading the way. Thousand of acres of young fruit trees have been, and are being set out. The fruit industry is being developed; until it appears that within a few years, fruit will be king of the valleys of the West.

But there is a tendency among the fruit growers of the Western part of the United States to underestimate the East as a fruit growing section. We are inclined to look out over our fertile orchard tracts; to scan to the record of our weather bureaus; and to say that here is the Mecca of the fruit grower; that here is the ideal location of the fruit farm; that here is all that can be desired in the horticultural line. We are forgetting that fruit growing here is in it's infancy, compared to that of some of our Eastern states; we are forgetting that it would take over thirteen crops of apples, besides the one raised in Oregon to equal a single crop of New York State; we are forgetting that the East far surpasses the West, at least in the quantity of fruit produced.

In the few moments asigned to me, I wish briefly to summarize the conditions which are vitally influencing, not only the production of fruit in the East and in the West, but also the competition of this fruit upon the market of the world.

First, let us consider market conditions. In this we must concede to the East an advantage. The large Eastern fruit belts are adjacent to such markets as New York, Boston, Philadelphia and Baltimore. These same cities are doors through which they can send their products to Europe. We in the West, to compete with them, must send our fruit to their very orchards, as it were, and sell it there for a profit. We must pay the freight charges for its crossing a continent. Or we can send it farther; we can send it on across the waters, and enter it against their fruit on the markets of the old world. But in either case it is they that have the advantage; it is the Westerner that must refrigerate his fruit; it is the Westerner that must pay the freight charges.

Then, secondly, they have the advantage in transportation facilities. In the East every orchard, relatively speaking, is visited by a railroad or an electric line. There is a net work of these over the whole country. They reach out into every community; they penetrate every valley. From the great central market centers they radiate in every direction, bringing in the produce of field and orchard. I am glad to say that the day will come when we will have a similar condition here. But today thousands of acres of the best fruit land in the West is not in fruit, largely because of poor transportation facilities. This is land lying ten, fifteen and twenty miles from a railroad. True, some sections here have good transportation facilities, but the great majority of them have not.

Thus the East has at least two great advantages over us: first, nearness to markets and, secondly, the avaliability of these markets through good transportation facilities.

But when we consider natural advantages; when we consider soil type and climate; it is here that the West stands forth pre-eminently. We have soil types light enough to produce the best peaches in the world; we have them heavy enough for the choicest pears. We have early soils for strawberries; we have later soils for apples. Even in limited areas we have extremes of soil types. Consider the Rogue River Valley. Here we have variations all the way from the lightest sandy and gravelly loams to the heaviest gray and black stickies. We have soil types suited for even the most fastideous fruits.

And our climate is also nearly the ideal. Our winters are mild; our summers are not excessive. We are troubled but little with winter killing; while in the limited areas in which spring frost occur, they are successfully combated by the use of oil fires. Our rain fall in most places is ample for maximum crop production. Where it is deficient, we usually have an abundant supply of water for irrigation purposes.

Thus we see that in soil type and climate, the advantage is with the West.

But our greatest advantage over the East has been, and at the present time still is, in our method of handling and marketing our fruit. The Eastern grower is, in a way, handicapped by tradition. He is inclined to handle his fruit as his father handles it. For example, they still market apples in barrels. They have not learned the value to the sale of the fruit of its appearance on the market.

It is largely our method of putting our fruit on the market attractively packed in neat boxes that is responsible for our success in competing with them at their very homes. True, the quality of our fruit is unexcelled; but it is the outward appearance rather than the inside quality which brings the highest price on the world's market.

It is in this way that we of Oregon and of the whole West have been able to obtain the maximum price for our fruits. It is in this way that we have been able to supply the very highest class of trade in the market, both in the United States and in Europe. It is in this way, by careful grading and packing, that the reputation of the Oregon apple has been built up; and it is in this way that the present high standard of our fruit is to be maintained.

We cannot expect the Eastern grower never to awaken to the fact that he is hopelessly behind the times in his methods of fruit handling. In fact, he is awakening at the present time, and is beginning to adopt Western methods. When he is thoroughly aroused along this line, the competition between the sections will be most keen. They will have superior market and transportation conditions to off-set our superior soil, superior climate, and as a result of these, superior fruit. Indeed, it is doubtful if we can compete with them along the lines of mediocre fruit. We will have to send them our extra fine grades and varieties which they cannot successfully produce, to compete with their best at a profit.

If then, we who are interested in the horticulture of the West, would establish the prestige of our fruit on the markets of the world, we must do it now while we can. Let us send to the East our very best. Let us send them fruit without a blemish. Let us establish for our fruit a reputation which will never be overcome. Let us make our country do what it is capable of doing, produce the best fruit in the world. Then, and not until then, we will not need to fear Eastern competition.

Friday, November 22, 9:30 A. M.

Meeting called to order by President A. P. Bateham.

Mr. R. H. Roberts gave report of committee on horticultural law, which advised the administration of horticultural laws by a single commissioner instead of a board of commissioners.

Mr. Williamson: I now ask that the president give me leave to make a statetment relative to the State Board of Horticulture. I ask the opportunity to be heard by this society. Mr. President and Gentlemen of the Society—It seems that here is dissatisfaction among the members as to the work of the State Board of Horticulture. It is evident from this law that the committee has drawn comparisons from this State and the State of Washington and that they presume that the law of Washington is better than the laws of the State of Oregon. (Statistics.) Oregon is the oldest fruit growing state on the Pacific Coast. Twenty-five years ago the State of Oregon was producing more apples than it is today. The whole country was covered with orchards of pest-infested trees producing more apples than it does today. In the State of Washington there was a limited area under similar conditions but the greater part of the country was virgin soil. Those districts which have become the fruit districts of Oregon had no pest-infested trees to contend with. In the first place I would like to call your attention to the percentage of increase in comparison with the production in Washington and compared with the United States as a whole. (Statistics.) Now when we come to compare the figures of Oregon and Washington, first I want to call your attention to the number of trees. The whole number of bearing trees in the State of Oregon in 1910 was 1,761,826 less than the whole number of fruit trees in the State previous to that year. The whole number in Washington in 1910 was 854,000 greater than the whole number in the state the year before. Oregon had gone back in the number of trees. As a matter of fact there was not less than 2,500,000 fruit trees went out of existence in 1911. In ten years more than 2,500,000 trees, without a doubt, had been destroyed in the State of Oregon. The great mass of those trees went out of existence for the good of the State and through the efforts of the Oregon State Board of Horticulture. Washington did not have that great trouble to contend with. (Statistics as to increase in production of various articles in the States of Washington and Oregon, and number of farms.) Now you will see that Washington made an increase of about 50 per cent greater than the percentage of increase in Oregon. The production of fruit in Oregon came nearer keeping pace with the increase in Washington than any other product. The percentage of increase in value was very much greater in the State of Oregon than it was in the State of Washington. In other words, the quality of fruit increased very much more in Oregon than it did in Washington in the same decade, due to the State Board of Horticulture getting rid of the pest-infested trees. Now I cannot see, under these circumstances, how it can be inferred that the Board of Horticulture in Oregon has fallen behind that of the State of Washington. You may say that the State of .Oregon has advantages which the State of Washington did not have. Washington probably would deny that. There is very little climatical difference. There are fine men in both. There is no better explanation than to say it is due to the efficient work done by the Oregon State Board of Horticulture, which works for much less than the same board of Washington. It is true that it might have done more work. It is true that it might have had much larger funds for doing this work. The people of the State of Oregon are more economical for their board than in Washington; and it has not been an easy matter for the board to get funds when needed. I am discussing the assumption that the work of the State Board of Horticulture is inefficient. There is just as much complaint against the single commissioner in the State of California as against the Board of Horticulture in Oregon.

Mr. R. H. Roberts: In order to put this proposition before the society for discussion I desire to make a motion. This is not a bill, but it is desired by the committee that the society appoint a committee to take this draft and form a bill to be presented before the legislature. Therefore I move that the society appoint a committee to draft from this outline a bill, and that that committee present their bill before the legislature. Personally, I do not desire to limit that committee. It should be a committee composed of prominent attorneys, fruit growers and commission men—a representative committee of everyone who would be effected by the horticultural law. There should be a clause regarding the time when that committee should report. Motion seconded.

Mr. Miller: I move that the committee be five. I do not agree that it should be composed of lawyers and commission men. I think five of the best horticulturists in the State should be appointed on the committee and let them consult their lawyers. I move to amend the motion.

Mr. Roberts: That is acceptable to me. No amendment necessary.

President Bateham: You do not state how the committee should be appointed. Is the president to appoint it. I prefer to leave it to the society. I do not care to take that responsibility.

Mr. Roberts: It will be satisfactory for the chair to name the committee.

Mr. Miller: Does the entire question of the reorganization of the present law come into this question which we are now discussing?

President Bateham: I should think it would.

Mr. Miller: If that is the case I should like to know if the members of the society have been advised of any other changes in the law. It seems to me that I have heard of numerous proposed changes. It is expected that the State Board of Horticulture as it is now organized will present some changes in the law for consideration.

Mr. Newell: It is the intention of the present board to make some recommendations to the present legislature to make some the present law.

Mr. Miller: Have you those changes here so the society can be advised what hey are?

Mr. Newell: No. It is to be similar to the present law of California, which is the most effective one now on the Coast. To establish quarantine districts and provide a quarantine inspector for the Port of Portland. That will be an absolute necessity. There will be some other minor changes, but I think .he principal point is providing the quarantine officer for the Port of Portland and providing better quarantine laws.

Mr. Miller: Are we not a little hasty in this act. Are we not likely to get the Horticultural Society pledged to something that will go before the legislature, and get the whole horticultural interests of the State into serious conflict over the proposed changes in the law. For my own part, I think it is the duty of this society to take some action in relation to the horticultural law. I think it should be the head and center of the thought on that subject. But I do not think we should be too hasty. It should first have been presented to the different societies of the State. Hood River, Grande Ronde, and other districts of the State should be asked to consider this question thoroughly and we should ask representatives of those societies to come here and work out a plan covering all these changes, after mature consideration. The result would be that the horticultural interests of the State could go before the legislature as a unit and avoid the possible division now imminent. It is an extremely important question and if we go before the legislature divided on this subject we are likely to get nothing, or a law with which none of us will be satisfied. It seems to me that if this matter was to be taken up it should have been referred some months ago to the different organizations throughout the State and let them think it over and send representatives here to give us their views on the subject. We need some changes, there is no question. But whether this law will get them is the question. I think a little more thought and care should be given to the subject and if we are going to take action upon it let us do it in some way that will bring good results. Have a special meeting of the society sometimes between now and the meeting of the legislature where these men could come before at least the officers and trustees of this society and formulate some law which would meet with the approval of the State. I want the action of this society to mean a great deal. I want it to represent the best thought on horticulture in the United States. We should take these matters seriously into consideration and study them out harmoniously. Let us know the result of similar laws in other parts of the United States—get the best thought of the fruit-growing states before we commit ourselves. I am inclined to the opinion that the work has not been broad enough in the preparation of the bill. I am inclined to think it has not been studied enough in the different districts. I think it would be wise if we could have the different societies of the State send representatives here to meet the officers of the society at some meeting before the convening of the legislature.

Mr. E. C. Roberts: I would like to say, for the benefit of those who are not familiar with the work of the committee, I am not at present a member of that committee but was for some time and just recently resigned. This committee took up the work last spring. It was composed of a number of gentlemen representing as nearly as possible the different sections of the State. The committee sent out all over the country where anything like an effective horticultural law was in effect and went over the laws carefully, and submitted them to attorneys for the preparation of a bill affecting the horticulture of the State of Oregon. This is not a matter of small consequence. It is a question in which all of us are vitally interested. The only thing that is asked is that a committee be appointed to consult with anybody, any society, any attorney, or anyone who can give them information along horticultural lines, for the purpose of effecting a horticultural law that would give us efficient and just service as from man to man. Our demand for a law which shall be a credit to the State of Oregon is no reflection upon the present conditions but is only an effort to keep up with the growth of the State.

Mr. Newell: Who were the members of the former committee? Who appointetd them, and by what authority?

President Bateham: I asked several gentlemen, without formally naming them as a committee. There was no formal committee appointed until, perhaps, two weeks ago. Mr. Roberts, Mr. McNary, Mr. McDonald, Mr. Power, and several others, who met to look up the matter and after they had investigated in a preliminary way I appointed a committee to present it before the society, which was about two weeks ago.

Mr. Newell: The committee was appointed about the 1st of November. I was appointed a member of the committee.

Mr. Roberts: In my statement "apponitment of committee" I was probably mistaken. There were a number of gentlemen designated to look into these matters without any formal appointment.

Mr. Miller: I want to say that I have no sympathy for the State Board of Horticulture. They are subject to our criticism, complaints, and abuse. Let us give it to them when they deserve it. I think the subject has not been sufficiently discussed. I come from the Yamhill County of Fruit Growers, one of the greatest in the State of Oregon. We want improvements in the law. I want to be careful. I want to know that the action this society takes will meet with the approval of the people of Yamhill County. I think it would be a wise move if this society would take some steps which would give every district and society a voice in the proceedings. I would, therefore, move that the motion be amended so that this bill and all questions of change in the law of horticulture be sent to the different societies throughout the State for consideration and that they be asked to send a representative to meet with the society at some time between now and the meeting of the legislature for the formation of a new law.

Seconded by J. O. Holt.

Dr. C. A. MacCrum: I happen to be on that committee which presented these recommendations. It isn't a bill—simply a recommendation. The State Board of Horticulture seems to think that they must put themselves on the defensive. We must have some law governing the handling of orchards for those who won't take care of them themselves. We want this in the hands of someone who has the power to enforce the law. I see men here who are just as representative of the fruit interests of the State as any who could be sent. This is simply a new plan to meet the new conditions, and we must meet them.

Mr. A. I. Mason: I think we should take it up this afternoon and thresh it out. We have representatives from all over the State. I will agree to come back this afternoon and help if you agree to do that. If we want to make this change let's do it now. I will come, for one, to this meeting. How many more will do that?

President Bateham: Will you put it in the form of an amendment.

Mr. Mason: I move you as an amendment that we go into a committee of the whole this afternoon to consider this matter in detail.

Mr. Miller: Speaking primarily in the interests of Yamhill County, I do not think it is the right thing to come here and take action on a question until it has been presented in my county. I want to know what my neighbors think about it before I come here and take action on this question of moment. I think when it has gone out over the State you will find that all the horticultural districts will take quite an interest in this law. It is a matter effecting every fruit grower. For that reason I think my position is right. It gives the fruit growers an opportunity to say what they want. I want the people of the State to know before it goes before the legislature. If this is not done I am afraid that the large fruit growing interests of Yamhill County will go before the legislature and fight it—a plan in which they have not been consulted. Many other counties would do the same.

Mr. Mason: I would like to ask Brother Miller who pays his expenses here today. Himself. Who pays mine? I do. It is an organization of individuals of Oregon and we only meet once a year unless a special meeting is called. Portland has offered us thousands of dollars in prizes. Why is the man at home not here today. I move you, as a substitute for the whole that we postpone this discussion until 2 o'clock. Motion carried.

BUSINESS ORGANIZATION FOR FARMERS AND FRUIT GROWERS.

Mr. Waldo G. Paine.

Mr. Waldo G. Paine, traffic manager of the Spokane & Inland Empire Railroad, gave an address on Business Organization for Farmers and Fruit Growers. He said in introducing his paper:

A muck-raking campaign has been started in the East against the apple industry, and The Country Gentleman has been publishing statements that are absolutely untrue. They admit that we raise fine fruit. They admit that our fruit comes to market in fine shape. The thing we must do is to get together so that we can place our product on the market as cheaply as they do. * * *

The States of Oregon and Washington have produced finer varieties of dried apples and pears and prunes than any of the old producing states. The United States last year exported to foreign countries $65,000,000 worth of dried fruits. These three northwestern states should be exporting three-fifths of the dried fruits of the United States.

No doubt you who are engaged in the fruit business have had the doubtful pleasure of listening to a great many statements containing panaceas for the ills of the apple industry. Some have been of value, others have not. But all have their effect in arousing public interest in the vital questions that now confront us.

I take it we are all agreed that perfection has not been attained in the apple business. That is as it should be, for once we allow ourselves to drift into that easy state of entire satisfaction, just that moment will we start going backwards. For in this age of changing conditions and methods there is no middle ground, no standing still, relatively speaking. The minute we stand still, that minute we fall behind, for the others will be forging ahead.

But I do not wish to be misunderstood in my position—I am not an alarmist. I am merely seeking light in the solving of certain vexing problems. I am as firmly convinced of the substantial and wholesome future of the apple business as I am convinced of the present favorable status of the wheat business. There is nothing inherently wrong with the apple industry; there are merely a few problems of more or less intricacy which must be solved, and which surely will be solved, before the industry will go ahead to the extent it deserves.

Out of the mass of things written and spoken on the problems of the industry, two things stand out preeminently important. These are:

First—Necessity for cooperation on a large scale in marketing.

Second—Imperative action is demanded to eliminate waste of poorer grades of fruit.

Each of these has wonderful possibilities. Together they embrace the minor problems of the industry. Their solution demands the immediate and intelligent consideration and determined action of the best minds in the Pacific Northwest.

Before going into a discussion of these problems, let me depart from the ordinary, natural sequence of things by telling you what effect their successful solution will have. I am satisfied it will give the apple its proper and rightful place as the world's fruit. Think what that means to this northwestern country of ours, but don't let the magnitude of it cause you to hesitate or to fear the goal is too distant, the way too hard.

There is no question that the apple is eminently qualified to take its place as the world's fruit. The fact that it can be eaten just as it comes from the tree and can be cooked in so many appetizing ways gives it a decided advantage. And it is in no nostrum to hold that the apple has truly wonderful health-giving qualities.

But before the apple can gain the recognition which comes only from universal use it must be placed in the hands of the consumer at a price within reach. This is not a question of selling a few thousand carloads of fancy apples at equally fancy prices. It demands the producing and selling of vast numbers of carloads at prices within reach of all. Now we come directly within the field of the first problem I mentioned a few minutes ago, the necessity of cooperation on a large scale in the marketing of the crop.

In this country of ours we have the soil and the conditions necessary to raise apples of the finest quality in every particular. But without an effective means of getting them to the people who demand them, they are in the same position as diamonds on an uninhabited desert isle. The diamonds, to have economic value, must be taken to some place where there is a demand for them. And in the case both of the apples and the diamonds, the man who transports them to the place of demand is a real producer in the economic sense, and is performing a high service.

As to the best method of marketing this big crop of ours, I will not presume to select. That is a question which demands the united thought of experts in all lines of the industry—growers, bankers, transportation men and all vitally interested. But I do believe this, that whatever marketing plan is selected, it will have to be bigger than any one district of this Pacific Northwest. Only by organizing on the basis of the larger unit, the Pacific Northwest, will the best results be obtained. That is the big point—unification of all apple-producing districts must be had if success is to be attained.

You can readily satisfy yourselves on this point by even the most casual study of the present marketing facilities. Each community has its marketing organization—and they are absolutely doing the right thing by having these—but, does each one know at all times what each of the others is doing, when and where it is sending its product and in what quantity? I am certain they do not.

The State of Washington, by a recent count, has 46 growers' unions and associations; Oregon has 36, Idaho has 15, and Montana has 3; a total of 100 for the four states. And they are all necessary, all are performing a needed service. But the service is exceedingly small compared to the good they could do by organized effort between districts. Cooperation would immediately increase their results to an incalculable degree and the Pacific Northwest apple would be demanded by millions where it is now demanded by thousands.

California learned its lesson in the marketing of citrus fruits. California's 1912 crop is worth $57,000,000, and 95,000 railroad cars are required to move it. Think of it. Ninety-five thousand cars to move the citrus crop of one state. We have about 12,000 cars of apples in the Pacific Northwest this year. When we get to producing apples as California produces oranges and lemons, how do you think we will manage to market them? Certainly not by our present haphazard, hit or miss methods. We will have to do as California found it necessary to do—cooperate.

Of course, their problem in California was a little easier to solve than is ours, because their crop is all in one state, while ours is in three or four. This merely calls for more united effort, a little more of the give and take spirit.

I believe we are all agreed that marketing on a broad scale is absolutely essential. Suppose, then, that we get right down to facts and go after what we want. Let us forget all about that time-honored procedure of agreeing that something is wrong, that something, we know not what and haven't the energy to find out, must be done, and following it up lamely by passing resolutions aimed at the fair side of the moon.

I propose that we first say we are certain something is wrong, telling exactly what that something is, even if we have to couch it in such homely language as this: "We are sure the Pacific Northwest apple crop needs a broad marketing plan." All right so far. Then, suppose we find out exactly what conditions are.

Let's get Uncle Sam to work on the problem. So far he has passed it up. The federal government has spent $100,000,000 during the last ten years to develop agriculture. It has been and is now a great and good work. It must be continued. It has helped to teach the farmer how to make the soil produce large quantities of splendid products. The department of agriculture has been directing attention to a number of features affecting fruit-growing, such as determination of adaptability of varieties to regions, and devising of methods of control of disease and insects. It has even devoted attention to the best methods of handling, transporting and storing fruits and other perishable products. But it has done nothing about teaching the farmer how to sell his vast crop. Producing it is only half the battle. Selling it is the other half, and just as important. Lurking behind this lack of selling facilities we may find our enemy, high cost of living, if I am not greatly mistaken.

And while Uncle Sam is batting the ball at a 400 clip, we might just as well get the state governments to take up the battle, also.

The State, too, has a duty to discharge in this connection. The constitution of the State of Washington says: "There should be established in the office of the secretary of state a bureau of statistics, agriculture and immigration under such regulations as the legislature may provide." The legislature of 1895 passed a law establishing this bureau and defining its duties.

Right here is our opportunity. The State investigates a great many fields and issues many valuable bulletins and pamphlets. It could perform a great and needed service by looking into the market problem and publishing broadcast the results of its endeavors.

I don't mean to confine this suggestion to the State of Washington. The State of Oregon should do the same, so should Idaho and Montana and all the states where the problem presses. This work by the states would be of inestimable value. It would dovetail into the work of the federal government and the two would be mutually helpful.

I am told that a movement is already on foot at Washington, D. C., to establish in the department of agriculture a division of markets. I hope this is so. But we need to get together and boost it along. We must impress upon congress and the department of agriculture the urgent need of such a division. The time to act 's right now. And while you are talking earnestly to the federal government, don't forget to insist that the efforts of the states are needed in this work.

Along this line, let me quote from an article that appeared in a recent issue of The Country Gentleman under the name of Walter V. Woehlke, a writer who has studied closely the apple question. He says:

"Excessively high retail prices restrict consumption, and a narrow market inevitably leads to low returns to the producer whenever the quantity of the high-priced article rises even slightly above normal offerings. Non-recognition of this axiom lies at the bottom of the anemia that has attacked the erstwhile swollen purses of the Northwesterners who grow the Big Red Apple. By patient, enthusiastic devotion to the cause of better fruit they have mastered most of the cultural problem; they know how to produce nearly perfect apples, but they have not learned the A B C of an equally important branch—the science of selling vast quantities of fruit."

That is as others see us. And I believe the observation is correct. There is no question about the ability of this country to produce splendid apples in large quantities, there is no question, in my judgment, about there being an ever-increasing demand, provided right marketing is practiced, but what is the use of having such wonderful possibilities if we do not take advantage of them by intelligent cooperation?

But there is another item of vital interest to the success of the apple industry. That is the matter of waste prevention. Try as you may, there is bound to be a certain amount of apples that will not grade up to standard. Practical efficiency demands that these be not wasted. The meat-packing business did not get anywhere near its possible efficiency until it began to utilize the by-products that formerly were wasted. Neither will the apple industry get its maximum and merited return until this waste product is utilized.

The solution of this problem would appear to be not so intricate as the marketing end. As in the marketing questiton, I see the one answer—cooperation. The grower's overhead expense is not lessened one dollar by wasting quantities of lower grade fruit. Why not utilize it and help to solve the problem of economical production? Surely, this is a work that demands the immediate attention of men of brains and energy.

Expansion of the market cannot continue indefinitely unless you can place the apple in the hands of the banker, the clerk and the laboring man at a price within reach of all. The way to do this is by cooperation.

Don't let fools place false beacons on the shores by telling you there is grave danger of overproduction. The careful grower need not be alarmed. He never had better opportunities than now. Skill in orcharding, cooperation in marketing, provision of storage facilities, proper financing and utilization of lower grades will send the wise grower on a pleasure trip tot Europe every year or two.

Mr. Mason: I move you we extend the reader a vote of thanks from this organization for the most sensible article yet read, and I say so because it is the only one that has been read on the marketing question—the most vital one before fruit growers. Motion carried.

Dr. Sanders: I have been more interested in this question than any that has been discussed in this meeting. I have run up against a good many difficulties in trying to bring the people together. In

The Dalles we have reduced the price of sulphur lime solution from $15.00 a barrel to $8.00 a barrel. * * Now when we started out we were patted on the shoulder and told that we were on the right track, but when we began to buy the things we needed particularly in our industry we met something else. * * We have an organization of retail men to fight; an organization of wholesale men to fight. They are business men organized upon business principles, and they place upon the articles they have to sell the cost of raw material, the cost of labor, incidental losses, profit and interest on money invested. Can you farmers do that? You do not have the privilege when you meet these organizations of putting a price on your produce commensurate with the cost of producing. You have no such right. The independent farmer, when he takes his produce to the markets says, "How much will you give me?" and when he buys, "How much do you charge." The farmer is not a business man. These are propositions that we must confront, and we will have to organize or become serfs or beggars. But will an organization of our industry do us any good? I have studied this question. I have lost thousands of dollars since I have been on the farm. And I have worked like the devil. I have tried to be progressive. I have tried to get in touch with organizations that would teach me better methtods. I want to say again that we must organize or go down. And when we get so we have a smattering of confidence in each other we can work. We have the name of being a class of people who have no confidence in each other. Until we as farmers meet heart to heart and hand to hand we will be a failure in the industrial system.

Dr. MaCrum: I want to offer a resolution that it be the sense of this meeting that we use all our efforts in this meeting to get the Northwest together in the marketing of fruit. (Adopted by rising vote.)

Meeting adjourned until 2 P. M.

Friday, November 22, 2 P. M.

VARIETY ADAPTATION.

By W. S. Thornber,

Director of the Lewiston-Clarkston School of Horticulture,
Lewiston, Idaho.

The idea of variety adaptation was emphatically brought to my attention while studying the numerous variations of certain varieties from different districts at our apple shows, fairs and product shows—and the work of recording these differences has developed into a very interesting study from an economic as well as scientific point of view.

It is not the purpose of this paper to lay down iron clad rules for our planters and growers, but rather to call attention to such facts as have come under my observation during the past eight years here in the Pacific Northwest.

It is almost impossible to form a perfect conception of how varieties behave in different districts without, in addition to studying their behavior in the orchard, making a careful comparison of the best fruits of the district with similar specimens from all parts of the country. This to me is the real value of our big show and fairs and the grower who visits such a display without making careful comparisons of what his district is doing with what other districts are doing, fails to get the best the show offers.

Fruit men everywhere are recognizing that there are certain conditions that naturally influence the growth of certain varieties and so we have come to recognize the suggestive value of the much abused recommended fruit list. True it is many of these lists are made up from personal likes rather than commercial values, and should be carefully perused before putting into practical use.

Other things being equal, the man of average intelligence on the ground familiar with local conditions is in better shape to pass final judgment as to varieties than any one else, regardless of training or experience—unless, it is the man who makes it a business of studying district factors. The following factors or combinations of two or more factors largely influence the behavior of fruits and varieties in any given section or district:

1. Soil.
2. Summer Climate.
3. Altitude.
4. Temperature (spring and fall).
5. Amount of sunshine.
6. Length of growing season (late fall).
7. Rainfall or irrigation.

Some of these factors have not been taken into consideration in the selection of fruits for some of the districts here in the West, and today those districts are harvesting the crops of somebody's mistakes.

It is absolutely impossible for any one to give valuable information relative to the selection of varieties for any particular section without taking into consideration at least four of the above factors that enter into the production of fruit, and if by chance any one of the other three factors vary radically from the normal, then it also must be taken into consideration.

The tendency of the recent arrival from the East to plant what his father planted half a century ago is rapidly disappearing here in the West and it is only rarely now that we hear of an individual planting the nursery list from Alexander to Zuzoff.

These great variety orchards are valuable only in two ways; first, they show the wonderful possibilities of a given section; and second, the heaven ground of the systematic pomologist who is always glad to see how varieties vary under different conditions. However, neither of these values enter into the consideration of dollars and cents in commercial fruit growing and so it behooves us as fruit growers to give special attention to adapting our varieties to the environments under which they are to produce crops.

Soil.—The soil is naturally the first factor to be given careful consideration in the determination of the value of a district for fruit growing purposes; however, while important alone it bears a small part in the determinations of fruits and varieties. Ancient horticultural literature lays entirely too much stress upon the soil and fails to recognize the fact that when other factors are favorable the soil is unimportant. If the soil has sufficient depth, is easily tilled, contains no unfavorable salts and is able to produce vigorous weeds of almost any kind, it certainly has merits worthy of consideration for fruit purposes.

For generations horticulturists have classified fruits relative to soil preferences, naturally giving the peach and apricot the light sandy soils, the plum and prune the heavy clay soils and the apple and pear the loams or medium grades of soil. However, any of you men who have made close observations at all here in the West must have seen apples growing on almost pure sand, plums and prunes anywhere and peaches and apricots on some of our very heavy clay soils. These facts do not interest us, however, as much as the varietal preferences that most of us must have observed here in the West. The Winesap, Jonathan and Rome Beauty have shown decided preferences for light sand soils while the Gravenstein, Baldwin, Grimes' Golden and Winter Banana apples have all shown weakness on the sandier soils and given splendid results on the medium or clay soils.

Summer Climate.—The summer climate has much to do with the ripening period of many varieties of fruit, frequently entering into such an extent as to make a variety extremely valuable or utterly worthless in a particular section. Of course the altitude and soil also play a part in this phase; however, the main factor is the temperature during the period of the latter part of the growing season of the fruit. Splendid examples of this are seen in the case of Jonathan, which normally is an early winter apple but as grown in some of our low warm valleys becomes a splendid fall apple. Or the Winter Banana, which is normally an early apple but when grown in a cool summer climate where cool nights prevail, it becomes an early winter fruit, being in its prime without cold storage during the holidays, thus making an excellent commercial fruit for those particular districts. This same general law applies to many varieties of other kinds of fruit as well as apples. Other notable examples are the Howell pear in the Palouse Country and the Magoon strawberry on Vancouver Island.

Another factor of the climate is the early fall winds, causing an excess of wind falls and limb rubbed specimens. The older an orchard community becomes, the less loss from these storms has been the experience of many districts.

Altitude. Altitude is one of the factors that we find very difficult to measure the effect of upon fruits in general because there is always two or more other factors linked so closely with altitude that it is almost impossible to segregate its effects. As a general rule, orchard fruits that do well at or near sea level are unsatisfactory at three thousands or more feet above sea level. In fact, some of them are very unsatisfactory at less than two thousand feet above sea level. My observations of the Yellow Newtown apple compels me to believe that while an excellent fruit at or near sea level, it tends to become very unsatisfactory above eighteen hundred to two thousand feet above sea level. At these high altitudes it is an exceptionally heavy annual cropper but produces too large a percentage of second grade or cull fruit as compared with its first class grades. The Jonathan and common Winesap both materially reduce in size in the higher altitude and lose the rich bright color. While the McIntosh Red and Wealthy lose in color they gain in keeping habits. The textures of nearly all varieties are improved by being grown at higher, but not extremely high altitudes.

Temperature.—The extremes of the summer and winter temperatures very largely control the planting of certain varieties in many parts of the United States, and while this is not generally true here in the Pacific Northwest it is a factor that should not be lost sight of in some places of the Northwest. This is particularly true in some of our low warm valleys where the soil is light and sandy and the growers are attempting to produce winter apples from such varieties as the Jonathan, Grimes' Golden or McIntosh Red. These varieties under such conditions become late fall products and must be marketed as such or heavy loss will surely result. The average Jonathan even from the later districts is not a safe proposition after November fifteenth, unless harvested before the ripening processes have set in and immediately properly stored, if not in cold storage, a very cool storage.

Districts with extremely cold winter weather are unsafe for such varieties as Rome Beauty, Spitzenberg and similar semi-tender winter sorts; however, most of our winter injury comes early in the fall and is largely due to improper orchard management rather than zero weather in winter.

Amount of Sunshine.—The length of daylight and total amount of sunshine during the latter part of the summer and early autumn days very largely decides the advisability of planting certain naturally high colored sorts in a given district. Sunshine is the main factor in color, but ordinary sunshine alone will not give bright color on fruit; it must be accompanied with cool nights, better frosty, but not necessarily so, and a clear transparent atmosphere, instead of a cloudy, hazy, smoky or even foggy atmosphere. Other things being equal, high altitudes produce better color than low altitudes but not infrequently the color of the high altitude, while dark and dense, is not right and clear.

The chemical properties of the soil, the system of pruning employed and the management of the orchard in general all play important parts with the sunshine in producing color in our fruit.

Length of Growing Season.—The one factor of annual late spring frosts eliminates more land from the fruit list than any other factor considered in the selection of fruit lands. While it is possible to overcome, with orchard heating devices and late blooming sorts much of the damage annually done by late spring frosts, yet it is an unfortunate fact that many thousands of acres of land are now planted to fruit here in the Pacific Northwest which should never have been planted. Such lands are extremely valuable for alfalfa, corn, gardening and general farm crops, but can never be highly profitable for orchard fruits.

Another factor that materially governs our plantings in some valleys is the frequency of very heavy freezes at the close of the growing season before crops can be harvested. This is a serious problem in some cooler valleys and will eventually mean the elimination of certain late maturing fruits from their planting lists. On two separate occasions I have known the Rome Beauty, Yellow Newton and Baldwin to be frozen solid on the trees during October in one of our little much advertised valleys. At the same time, the fruit crop was ruined, many young rapidly growing trees in the valley were winter killed or more accurately, fall injured by the same freezes. Radical measures in orchard management may partially solve this difficulty but the selection of early maturing varieties is the only safe plan.

Rainfall or Irrigation.—To some people "Irrigated" or the phrase "Irrigation necessary" condems the land so far as they are concerned, because they have been lead to believe that irrigated trees are different than non-irrigated trees and that fruit produced in irrigated sections is inferior to fruit grown with only natures supply of water. I believe that such people are honest in their convictions, but I believe their convictions have come to them through channels of prejudices rather than personal observation.

It is a known fact that irrigation makes possible a wider range of varieties in a section, adds color to most varieties, causes trees to be more productive, improves the quality of 95 per cent of our fruits and increases the percentage of first class fruits under most conditions. First class Yellow Newtown, Winesap and Spitzenberg apples are now being grown under irrigation in one of our fruit sections that a few years ago produced worthless inferior fruits of the same varieties.

The Value of a Variety.

In order to measure the value of a variety of apples in any given section its factors must be segregated and their values estimated as compared to other commercial varieties of known commercial factors.

In a general way the following factors measure the value of a variety for any given section:

1. Color—Clear, attractive, bright.
2. Flavor and Quality—Pleasant, rich, juicy.
3. Bearing habits.—Annual heavy cropper.
4. Keeping and shipping values.—Good, fine skin.
5. Growing habit of the tree.—Permanent.

Some pomologists would have us measure the value of a variety by the following rule, but the average grower must readily see that it lacks the essentials of the trade.

1. Value as dessert fruit.
2. Value for culinary purposes.
3. Behavior of the tree, with particular reference to its freedom from pests, etc.

Color.—Unless a section can produce clean, bright, attractive fruit of a given variety it is almost useless for it to endeavor to grow that variety, for the trade is becoming even more particular now than it was even a few years ago. They simply demand as a first class fruit that all factors be perfect and inasmuch that as color is the chief selling factor, particularly at the retail stand. This factor alone first of all, must be as nearly perfect as it is possible to make it anywhere. This does not mean that the fruit must be all red or all yellow, but be true to color, attractitve and bright. The Winter Banana must have its red cheek, the Gravenstein its yellow back ground, but it is not necessary that the Rhode Island Greening have any shading on the exposed side. A good, rich, clean green back ground is sufficient for this old apple.

Flavor and Quality.—The flavor of the apple is becoming better and better known by the trade; however, it will be a long time before many people will be able to designate the difference between good and poor flavors in the same variety, and so while this is an important factor it must constantly remain a secondary factor.

Bearing Habit.—Just as long as fruit growing is a commercial proposition, the bearing habits of the variety must be taken into consideration—and the heavy annual bearers, even though of lower quality, will always have the advantage, commercially, of the biennial or very shy bearers. In a recent determination of the behavior and profitableness of certain varieties of commercial apples in the Pacific Northwest, we find the Spitzenberg at one end of the list and the Black Ben Davis at the other and yet in spite of the results of this investigation I would not over-plant with the Black Ben Davis as I am sure this variety will be one of the first to suffer in the times very heavy over production.

Keeping and Shipping Values.—It is almost useless to grow abundantly a variety that is a poor keeper and bad shipper, for in spite of fate it will be necessary at some time or other in the life of an orchard to ship a long distance or store for better prices.

Growing Habit of the Tree.—So long as the tree makes a reasonably fair growth this is not so serious a factor; however, there is some danger in the production of certain fancy sorts like the Canada Red apple and the Winter Nelis Pear. In some districts of this country these trees are very difficult to bring to a profitable frame development, and can only be brought to the best stage by repeated cutting back and constant pruning.

It is worse than madness to compel a variety to grow in a district where the conditions are not primarily adapted to that particular variety or expect a variety to be better in every way in any district than it is in every other district in the world. We must concede that what we gain in one way we are very sure to lose in another, and so it becomes a question of bringing the most valuable factor or unit of any particular variety to a higher degree of perfection than is possible anywhere else under similar conditions.

Fruit Sections.—While most of our fruit sections vary distinctly yet there are relationships existing among these varieties which makes it possible to group certain varieties together in combinations of natural conditions. We have come to recognize four distinct horticultural regions in the Pacific Northwest; true it is that there are many local variations but the general factors are fairly uniform for these groups of district or valleys.

The Coast Region—Or that part of Washington, Oregon and British Columbia west of the Cascade Mountains is characterized by a rather heavy clay soil, an altitude varying from sea level to four hundred feet above, a rather even temperature with few variations or extremes, a heavy annual rainfall most of which comes during the winter months, generally dry summers, long growing seasons, and while a lot of sunshiny weather, the autumns are generally hazy, which to a limited extent prevents the highest possible coloring of certain varieties of fruit.

A region with factors of this kind is particularly well adapted to such varieties as Olympia Baldwin, Northern Spy, Ortley, Yellow Newtown, Glowing Coal and Wagener. By a comparison of these fruits one will readily see that they, with the exception of the Wagener, have a common origin in rather low altitudes and generally in clay soils. It will be seen later that the Wagener is one of our cosmopolitan fruits and has few limitations; however, the other varieties are limited to certain groups of factors or conditions, and cannot be successfully grown in regions where the conditions are strikingly opposite to those of the Coast region. The Northern Spy and Olympia Baldwin become very shy bearers at high altitudes on deep, rich but rather dry soils and the Ortley and Yellow Newtown, while generally juicy and crisp, become dry and woody under similar conditions.

The Inland Valley Region of central and eastern Washington, Oregon and British Columbia and eastern and southern Idaho are characterized by light, sandy to volcanic ash or even a gravely loam soil, an altitude varying from 350 to 1400 feet, a very light annual rainfall, long growing seasons and the maximum amount of sunshine and mild winters.

Districts with common factors of this kind will produce Winesaps, Staymans, Spitzenbergs, Yellow Newtowns, Arkansas Blacks, Jonathan, Rome Beauty, Grimes' Golden and kindred sorts of the highest grrades of apples, providing good cultivation and reasonable treatment be given.

If the valley is too warm and the season forced too much, early winter sorts do not color sufficiently without leaf thinning, before they have to be picked and are very apt to ripen before they normally should. While on the other hand, if the soil is too deep and rich and an abundance of water is used, the Spitzenberg, under normal treatment may become a very shy bearer or produce only occasional heavy crops of well colored fruits in sections of this class. Experience shows greater difficulty in the selection of commercial fruits for these valleys than any other in the northwest, inasmuch as any variety will grow and produce good fruits, but the best is always hard to determine.

The McIntosh Red when grown under these conditions is probably the most perfect apple for dessert use for a short period of time, but the difficulty is instead of remaining a winter fruit, it becomes an early fall fruit.

If certain apples of the group particularly adapted to the valleys be planted in high altitudes where the seasons are short, they fail to color, produce size or attain proper development. Others become shy bearers, while still others take on abnormal characteristics. The Winesaps do not attain sufficient size, while the Yellow Newtown vary in size, color, form and texture. The Rome Beauty is not seriously affected because it is more or less of a cosmopolitan fruit.

The Inland Upland Regions are characterized by a deep, rich basaltic or even loamy soil, moderate amounts of rainfall, dry, warm, but not extremely hot summers, an altitude varying from 1200 to 3000 feet above the sea level, comparatively short growing seasons and long but not severe winters.

These areas are adapted to a comparatively short list of orchard fruits. It is essential that varieties that succeed here be sorts that attain their growth early in the season. Late maturing sorts are not adapted to those conditions. Such varieties as Jonathan, Rome Beauty, Wagener, York Imperial, Gano and Black Twig attain a degree of perfection that is highly desirable for long keeping, shipping fruit. Very frequently autumn sorts in most sections become early winter sorts in this region if properly handled, while some of the later sorts become extremely late under favorable conditions.

It is almost useless to attempt to grow commercially such varieties as Northern Spy, Rhode Island Greening, Spitzenberg and kindred sorts without irrigation in these districts, as they become extremely shy bearers, but with irrigation are very satisfactory. We have definite records of these varieties which show an average of less than one box per tree during the last eight years from trees twelve to eighteen years of age. Varieties like the Winesap, Ortley, White Winter Pearmain and Yellow Newtown require entirely too long a season for regions of this kind and occasionally such sorts as the Ben Davis become veritable corks or blocks of wood when grown here.

The Inter-Mountain Regions are characterized by deep gravely loam, light clay loam bearing more or less gravel or volcanic ash soil, comparatively short growing seasons, a minimum amount of rainfall, warm in summers, frequently very cold winters, very high altitudes, frequently ranging from 3400 to 5000 feet above the sea level and plenty of sunshiny weather during the summer and autumn days.

The number of commercial varieties for these sections are of course, limited, especially in sections where the cold winters cut out the more tender sorts. Commercial work has progressed nicely in these high sections by planting Jonathans, McIntosh Reds, Wageners and Wealthy. The high altitudes and climatical conditions have completely overcome the earlyness of these naturally early sorts, until now we frequently find them keeping late into spring. The cold winter appears to have little or no effect upon them when properly treated, and the seasons are sufficiently long to develop all that is desired. The milder high altitudes are producing first class Jonathans, Rome Beauty, Wagener and various other sorts. In areas of this class no late developing varieties should be planted as the drought of the later part of the season is sure to interfere with the proper maturity. Such apples as Rome Beauty, Yellow Belleflower and York Imperial for winter use, McIntosh Red, Duchess of Olenberg, King of Tompkins County and Wolf River for fall use and Yellow Transparent and Red June for summer use are practically all that can be depended upon to do anything where severe drought without irrigation exists.

The Northwestern Harmony.—A careful perusal of the foregoing will show that the Pacific Northwest is probably the best all round balanced variety fruit district in the world. All of the high class commercial sorts are at present grown to a degree of perfection not excelled anywhere, and so systematically divided into groups for different regions that while state vies with state, or district with district, the competition among ourselves need never reach that stage that will be serious to one another.

The regions described present vastly different conditions in the production of first class fruit. Each produces a higher grade of fruit of a few well chosen varieties than it is possible to produce in any other region with the same varieties. However, there are certain varieties that are more or less cosmopolitan and can be grown to a high degree of perfection almost anywhere in the Northwest.

Cosmopolitan Varieties.—There are comparatively few fruits that enjoy the distinction of being socalled Western cosmopolitan fruits; however, the Rome Beauty, Wagener and Yellow Belleflower apples belong to this group, grown as they are practically all over the Northwest at high and low altitudes, wet or dry and with culture and without culture, if any apples grow, these will. This same thing is true to a certain extent of the Bartlett and White Doyenne Pears, while they will not stand the same abuse that the apples will, in all cases they are grown if pears grow at all. The Peach plum, Italian prune and the Yellow Egg plum are also not seriously particular as to their chöice of region. There are a great many apples being planted in the West which are adapted only to limited localities. Extreme care should be used in extensive plantings of these sorts until thoroughly tried out and their merits commercially demonstrated. When well grown they have few strong competitors but if poorly grown they are almost worthless to the trade.

Pears.—The behavior of commercial varieties of pears under different conditions has not been as closely studied as it should. However, general recommendations can safely be made from the information at hand.

The Bartlett pear is generally recognized as one of our most Cosmopolitan fruits and does well at all altitudes under general normal conditions with the exception of sections that are extremely dry just previous to and during the ripening season. In these sections the fruit is under-sized, contains a surplus of stony tissue and is of unsatisfactory quality.

Winter Nelis is not so Cosmopolitan in nature, but does well under most conditions. In western Washington where russeting is common, it frequently becomes entirely covered with russet, while in other sections it may have only a lacing of russet. It must have sufficient water to finish upon, or it becomes entirely too small for commercial purposes.

The Comice, Anjou and Bosc are three of our highest class pears, very satisfactory in most sections but rather tardy bearers in nearly all sections. However, after once coming to full bearing, they give satisfactory yields. The Clairgeau and Bonne de Jersey are not as commonly grown as many sorts, but are especially valuable west of the Cascades and in sections where there is plenty of moisture to finish upon. In addition to these varieties there are many more that can be satisfactorily grown, but are not well known in commerce.

Cherries.—Commercial cherry culture is limited more or less by cold, cold winters and late frosts; however, the Bing and Lambert are doing well in most of the fruit districts. These are the best all-purpose black cherries that are growable in practically all sections. The Royal Ann is the most popular white or light cherry grown, but tenderness in bud and wood prevents its use in any section that has cold winters or very severe late spring frosts. The Royal Ann is supplanted in the colder, more severe locations by the Vilne Sweet cherry, a light colored very hardy, sweet cherry imported from Russia. While producive, it is not a first class shipper nor is it of high quality, but is especially valuable for regions where the Royal Ann cannot be grown. If the Royal Ann can be grown, do not plant the Vilne Sweet as there is no comparison between the two from the quality point of view.

Black Republican and Black Tartarian are two more very popular varieties for mild climates, but cannot be grown in high altitudes where the winters are severe, nor on the uplands where late spring frosts are common, as they are very tender in both fruit and bud and blossom.

The May Duke, Late Duke and Reine Hortense are all comparatively hardy resistent sorts of the Duke type and can be grown where it is impossible to grow the sweet sorts. As a fruit of high quality these varieties are taken by many in preference to the sweet sorts. They are not good shippers, but are excellent bearers.

The sour cherries have many first class sorts adaptable to Western conditions and growable almost anywhere. The Olivet is by far the most popular, both as a home orchard and commercial sort. Other good sorts are the Northwestern and Dyehouse.

The following is the recommended list arranged and issued by the writer. Local conditions make it possible, very frequently, to vary it considerably, yet the general plan is a safe one for commercial planting. The letter following the name indicates the season of the variety, "E" early, "M" medium, "L" late:

APPLES.

Coast Region	Inland Valleys	Inland Uplands
Northern Spy (L)	Spitzenberg (L)	Rome Beauty (L)
Olympia (L)	Yellow Newtown (L)	Wagener (L)
Glowing Coal (M)	Rome Beauty (L)	Jonathan (L)
Yellow Newtown (L)	Winesap (L)	W. W. Pearmain (L)
W. W. Pearmain (L)	Jonathan (M)	Gano (L)
Yellow Belleflower (M)	W. W. Pearmain (M)	York Imperial (L)
Wagener (L)	Gravenstein (M)	King (M)
Gravenstein (M)	Duchess (E)	Gravenstein (M)
King (M)	Grimes' Golden (M)	Duchess (M)
Ortley (L)	King (M)	Yellow Transparent (E)
Yellow Transparent (E)	Arkansas Black (L)	Winter Banana (M)
Williams (E)	Yellow Transparent (E)	Williams (E)
	Winter Banana (E)	
	Williams (E)	
	Delicious (M)	

PEARS.

Winter Nelis (L)	Winter Nelis (L)	Winter Nelis (L)
Clairgeau (L)	Clairgeau (L)	Clairgeau (L)
Anjou (M)	Anjou (M)	Anjou (M)
Comice (M)	Comice (M)	Comice (M)
White Doyenne (M)	White Doyenne (E)	White Doyenne (M)
Seckel (M)	Seckel (M)	Seckel (M)
Bartlett (E)	Bartlett (E)	Bartlett (E)
Clapp (E)	Clapp (E)	Tyson (E)
Flemish (M)	Flemish (M)	Flemish (M)
	Bosc (M)	

SWEET CHERRIES.

Royal Anne (E)	Royal Anne (E)	Bing (M)
Bing (M)	Bing (M)	Centennial (M)
Hoskins (L)	Hoskins (L)	Hoskins (L)
Lambert (L)	Lambert (L)	Lambert (L)
Black Republican (L)	Black Republican (L)	Vilne Sweet

SOUR CHERRIES.

Olivet (M)	Olivet (M)	Olivet (M)
Northwest (L)	Northwest (L)	Northwest (L)
Montmorency (M)	Montmorency (M)	Montmorency (M)
Early Richmond (E)	Early Richmond (E)	Early Richmond (E)

DUKES.

May Duke	May Duke	May Duke
Late Duke	Late Duke	Late Duke
Reine Hortense	Reine Hortense	Reine Hortense

PEACHES.

Alexander (E)	Elberta (M)	Alexander (E)
Triumph (E)	Foster (M)	Triumph (E)
Early Crawford (E)	Hills Chilli (M)	Wonderful (M)
Charlotte (E)	Salway (L)	Champion (E)
Hale (E)	Late Crawford	Early Crawford

The following table shows a comparison of the scores as given by disinterested judges of the exhibits of the various districts at the National Apple Show in Spokane, 1910.

Inasmuch as these fruits were selected by different exhibitors with different ideals in mind the personal difference will enter into the real value of these figures; however, it shows in a general way the value of the color, development, size and shape of each variety for several districts. The judging did not enter into the flavor, quality, texture or the internal condition of the fruit, but judged much as a retail buyer would have to measure value.

The work has been done for the past four years at various shows, fairs and exhibits and sooner or later will be complied into one general report of the behavior of varieties under different conditions. This report, however, is taken from the scoring of the 1910 exhibits.

Location	Winesap	Yellow Newton	Spitzenberg	Jonathan	Rome Beauty	Wagener	Northern Spy	Stayman	Gano	Bellflower	Arkansas Black	Baldwin	Ortley
Methow	9.5	9.5	10.0	10.0	9.0		9.5	10.0	10.0	10.0	10.0	9.0	9.0
Spokane	8.0			10.0	9.0	10.0					9.0	10.0	
Oroville			7.0	9.0	9.0					8.0	8.0	10.0	
Stevens Co.	8.5	8.0	7.5	10.0	10.0	10.0	9.0	7.0	8.0	9.5	9.0	10.0	
Yakima	10.0	9.5	10.0	10.0	10.0	9.5	8.5			9.0	10.0	9.0	10.0
Prosser	10.0	10.0	10.0	10.0	9.5	9.5	9.5	10.0	9.5	10.0	10.0	9.0	10.0
Goldendale	9.5	10.0	10.0	9.0	9.0	9.5	10.0	9.5	10.0	9.0		10.0	
Clarkston	9.5		9.5	10.0	10.0	9.0			9.0		9.5		
Wenatchee	10.0	9.5	9.5	10.0	10.0		9.0	10.0	10.0	9.0	9.0		
White Salmon	8.0	10.0	10.0							10.0	8.5		
Lyle		9.5	10.0	9.0	9.0	8.0			9.0		8.5	10.0	9.5
Walla Walla	8.5	9.5		10.0	10.0				8.5		9.0		
Hood River		10.0	10.0				9.5						10.0
The Palouse	5.0	8.5	8.5	10.0	10.0	10.0	6.0	6.0	9.5	10.0	7.0	6.0	7.0
Western Wn.		10.0	9.0			10.0	10.0			10.0	7.0	10.0	10.0
California				10.0	9.5				10.0	10.0		10.0	
Montana				8.5									
Colorado	8.0		8.0	9.5	10.0								

He displayed a chart showing the adaptation of various apples to different sections and said that a part of his work was to choose ten or twelve varieties of apples and ask the different regions to select the kind best suited to their soil and climate.

A vote of thanks was given Prof. Thornber for his paper and the interest he had taken.

Mr. Miller: I would like to make a motion that this paper which has been so tremendously interesting be referred to a special committee of five from this society, who will work in conjunction with Prof. C. I. Lewis of the State Agricultural College, to formulate a similar instruction for the State of Oregon in relation to apples and pears.

Question.—Has your experience with the Red Cheek made you think it is as limited as the Newtown?

Prof. Thornber: No. But I have found it a short-lived tree.

Prof. Thornber was asked if the packing had anything to do with this scoring. He said not.

He was asked if he used the same basis of scoring as used in the East. He said he emphasises color a little more. "When we are considering apples in this way the factors noted are size, color, and what you might term finish—the things that will sell the apple."

He was asked if any particular varieties were more subject to core rot.

He said: "You will find some more subject to core rot. We find that such fine-grained apples as the York Imperial is subject to internal flesh conditions. We must have a good outside skin—not a thin skin, but a fine-grained skin."

Mr. Miller: I take it that this scoring is only from the apples presented. It would not be safe to take that scoring as recommendation for planting.

Prof. Thornber: No, I would not want to take that alone. But in our study of a district we study production, etc. If a district cannot produce a fine-looking Spitzenberg or Yellow Newtown it is no use planting it.

Mr. Miller: I hope that this committee will look into that matter and determine the grade of fruit adapted to the different districts.

Prof. Thornber: That is true. In some counties they would get about one plate of nice Yellow Newtowns off a tree and the rest would be small.

Prof. Thornber was asked about the Delicious in the unirrigated districts.

He said you cannot grow a first class Delicious in a region where you have a hot, dry summer. The Delicious is an apple you must go mighty carefully with.

Mr. Mason: I find we have plenty of members here to carry on our unfinished business.

President Bateham: It is suggested that all motions relative to the proposed horticultural law be laid on the table. Hearing no objection we will again take up the report of the committee.

Mr. Roberts: I move that a committee be appointed by the president of the society consisting of eleven members who shall take the draft that the committee presented to the society and from that prepare a bill which they shall bring before the legislature.

Seconded by Dr. Sanders.

Mr. Mason: Let me ask a question for information. Will we give that committee full power to act on their best judgment? I believe that the best plan.

President Bateham: They would be confined to this. This is considered a plan and this report is to be handled by this committee and put into shape to be presented to the legislature. It is my understanding that this committee be confined to that draft.

Mr. Mason: I think the committee should not be confined to this report. I believe eleven members of this association could frame a bill that would be favorable to everybody. It would be better to simply appoint a committee to draft a law in line with these suggestions. I suggest that we have those recommendations read slowly and when anyone has a suggestion, express it then. Cut the speeches short. This is the best representation the organization will have for another year and I believe it better be considered now.

Prof. Reimer: A number of those here have spoken to me since this session opened asking what you are talking about. I suggest that you read the report for the benefit of those who were not here this morning.

President Bateham: Read the report and we will have questions or remarks as we go.

Secretary read Section1.

Mr. Goodrich: At somewhere in this discussion we need to arrive at the heart of the matter. The question involved in this first section is the large question, "Shall we change our horticultural system?" Shall we discard the system we have now and adopt another? I am the Horticultural Commissioner of this district. Now, from a partisan standpoint, you might excuse me for opposing any measure that will abolish that office. To make my position absolutely plain to you I will say that I care nothing about that from my own personal standpoint. The question with me is to secure the greatest efficiency for the money paid by the State of Oregon. What I want is that you shall each and all understand just what we are doing when we pass on this. If this first paragraph carries we abolish our whole horticultural system. We are adopting practically the system of Washington. The details of carrying this out are of small importance. The large question is "Do you wish a change in our horticultural laws?" If you do, vote for this. If not, vote against it. All that I want is that it be voted upon fairly and squarely so that a man will not vote for this blindly, thinking he is voting for improvement in our horticultural laws when he is voting for abolishment of our horticultural laws.

Dr. Sanders: The present appointive board is the Governor, the Secretary and the Treasurer. They may not be fruit growers, and if not, what do they know about appointing a man for this office? I would be in hearty accord with putting this in the hands of men who are capable of appointing competent men.

Mr. Campbell: In the seven years that I have been in this State I have heard not a word spoken on this subject in this district. We want to be careful in these considerations. I have been in the county of Umatilla as inspector four years and have had to meet with three commissioners who were not fruit growers and it makes it hard. We want to work out the best way to wipe these old orchards out and put new ones in.

Mr. Goodrich: A change in the method of appointing the commissioners would not work a revolution in our horticultural laws. Personally I do not favor the transference of power from the present board to either of the boards named in this bill. So far as politics is connected with this matter, I am always sorry when politics enter into it, or personal grievances. The question at issue in this is the question of revolution of our horticultural laws. If the present board are not the right ones, change them. But this does not do that. It changes the whole system. The question involved in this is the question of the system of horticultural law that we shall have. If you want the present system, keep it. The question is one of retaining the present system or adopting another.

Mr. Campbell: We have never gone into that. It has never been mentioned or thought of. But I was referring to the condition of our sister state which has entered into it. Washington is under the ban now of that condition. We need laws so that the present commission can act quicker. Now they cannot act under thirty days. We want some of these changes—not change of men.

Mr. Roberts: There is no chance for the condition that the gentleman suggests arising if this section is adopted. The proposed change here is for having the balance of power on that board.

Mr. Mason: Under this proposed plan there is another feature. It takes ability to get the appointment. Under the present plan all it needs is for a man to have a few friends sign a petition and send it to the Governor. Under the present system he may be a political appointee. He may be a favored appointee. I do not wish to insinuate against the present board. When you place a horticulturist in control of this board you are not going to have much politics in it. What I like about this bill more than anything else is that those appointed have to have ability, to get their appointment. He should possess certain qualifications to earn his money.

Mr. H. M. Williamson: There is no question that that is desirable. The only question at issue is whether you want to wipe out the system of having the State Board of Horticulture made up of six members and substitute in place thereof a commissioner of horticulture.

Mr. Worsley: Being a County Inspector, I know that in our section of the State we are working for the best interests of horticulture. Now, if there is any valid reason why the change is to be made I would like to know the reason. And if they have any good reasons I am ready to cooperate for the best interests of all.

Mr. Mason: They gave the reasons, that there is not enough power or money given them under the present law to operate successfully. The proposed plan is that you put men in and give them a salary for it and have them give all their time to it. ıt is a business proposition and not a question of personalities. It is about time that we are turning over our present system. You have a law on your statute books today that permits you to sell an apple with a fungus growth on it.

Mr. Worsley: Why not abolish the law? Why change the present commission? We can make the law without changing the commission.

Dr. Sanders: I think that is a reason for making the change. The law has not been enforced and in my region you cannot get it enforced.

Mr. Roberts: The gentleman on my left suggested the idea that the operation of the law was very slow. He says it takes thirty days, perhaps forty, and he would like a change in that respect. What is the reason that you are delayed so long? I will tell you. I know. The reason is this: You have a board that must be called together and then the board acts and no one man is responsible. You cannot attach the responsibility to anybody. After the meeting is over you go to your commissioner and ask why such a thing was not done. If you have one man who is responsible you can go to him and say, "Here, we want the law enforced." Speaking entirely from a committee standpoint, our reason for putting this clause in is entirely business—from the standpoint of increased efficiency. If you disagree with the committee you will not adopt this today. If you agree with the committee this will be adopted. Arguing for efficiency, cannot one man who is the central head and paid a good salary, backed up as this provides and giving his whole attention to it, be more efficient than an underpaid honorary member? Speaking from a purely personal standpoint and taking one man who has a thousand dollars worth of pears, can that man afford to give his time for three dollars a day backing up his inspectors? Is our plan more efficient than the present one in operation? That is the issue, and I request that each and everyone of you keep this in mind and vote on that today.

Mr. Lowe: Let me give you an instance which has worked great hardship in our part of the State, southern Oregon. I and my partner were buying about three thousand peach trees. We had contracted for delivery of about one thousand of those trees. When they were unloaded I looked at them and told the gentleman I did not want them. I looked for the county inspectort's release for the boxes. I found it on one. On the others I did not. We were forced to take the trees. One year afterwards the commissioner asked us to take up the tree. One was found out of the thousand that was not diseased. We refused. If there is no law saving us from taking the trees from the nurseryman why should the law compel us to take the trees up?

Mr. Mason: It seems as though this discussion has resolved into the question of whether we shall make this change or not. Therefore, I move you that it is the sense of this horticultural society to make this change as outlined in the committee's report. (Seconded by Dr. Sanders.)

It was moved that before comparisons were made between this and the old measure it be read so that an opinion could be formed.

Mr. Worsley: I move that the entire report be read for the benefit of all.

Mr. Mason: With the consent of my second I would like to withdraw the former motion and make a new one.

I move that a committee on Horticultural Law consisting of fifteen members be appointed by the chairman of this society from the different districts of the State and that they be given full power to act in line with the recommendations of this report, for this society. (Seconded.)

Mr. Miller: I would like to suggest an amendment to his motion that this committee represent the largest fruit growing sections of the State, and I would like to add to that that there be placed also on this committee the head of the Department of Horticulture of the State Agricultural College and the present president of the State Board of Horticulture.

Amendment accepted.

Mr. Miller: We want the experience and knowledge of the head of the Horticultural Department of the Oregon Agricultural College and of the State Board of Horticulture and have all the big fruit interests of the State represented.

Mr. Mason: I move that the president and secretary of the Horticultural Society be included.

Mr. McDonald: I wish to amend the motion by having included in that committee, or invited to meet with that committee, the legislative committee of the Pacific Coast Association of Nurserymen. This law will effect nurserymen as well as fruit growers.

Mr. Mason: I accept the amendment, and any other committee that wants to meet with this committee of nineteen. (Motion carried.)

Mr. Roberts: Is it not a fact that the by-laws provide that the president and secretary are ex-officio members of all committees?

Mr. Power: They do.

Mr. Forbis: It will be necessary, I should think, that this society should meet again and approve or reject the action of that committee.

President Bateham: They are given full power to draft a bill and present it to the legislature.

Mr. Forbis: I am inclined to think that we ought to have a meeting of this society at a day set to hear this amendment and adopt this law. I do not think it will be the action of this society unless it is approved.

Mr. Mason: Your idea is that the committee get the bill ready and call a special meeting of the society to approve it?

Mr. Forbis: Yes.

Mr. Roberts: I think we should act on Mr. Mason's motion that this society accept this plan.

Mr. Mason: Put it before the society so that some could not say they had never heard the measure.

Mr. Roberts: I would like to ask a question. Would it be advisable for us to adjourn to meet at some particular day in the future to discuss this question, and about what time would it be advisable to have that meeting?

Mr. Forbis: About the 15th day of December.

Mr. Bateham: If the society does take action today as to the bill do you think it would be still necessary to call the meeting?

Mr. Forbis: I think the society should meet at a certain time to adopt this report. It is a question of putting the society in a position where its wishes will be known. Otherwise opponents of the bill might say the society might not approve it if submitted to it.

Mr. Mason: It looks to me that if we would adopt it right now as recommended and place it in the hands of fifteen that is all any legislature would ask.

Therefore, I move you that we give this change our unqualified recommendation and that we give the committee full power to act in the framing of this bill as outlined by this report. (Seconded.)

Mr. Miller: That would practically do away with any work of this committee. What I think we need is more time for deliberation. It is new to most of us, and nobody was expecting this sort of thing and are not prepared to act. We are completely changing the whole system of horticultural law. Would not its adoption take the whole scheme of county regulation out of the hands of counties and turn it all over to the State? Our present system and present organization is such that counties that have a very extensive fruit interest make whatever regulations their conditions demands. They can spend $20,000 if they like in a county for the protection of fruit interests. Now then the State must spend that money if they desired it.

Mr. Roberts: No, sir. Any moneys which the people of the county desire to spend has no reference to this law.

Mr. Mason: That is one of the things the committee can thrash out better than this body as a whole.

Mr. Miller: We must accept this very proposition. Do we understand it?

Mr. Mason: I did not know anything of it until this morning. I am in this work for the dollars and cents.

Mr. Miller: I would like to talk to my neighbors and know how they feel about this thing. We have a representative committee and an organization which I think can bring before this society a bill which will be acceptable to the fruit growers of the State. This committee should meet and should ask the fruit associations of this State to send their views on this subject, and then have a meeting of the society called later to adopt their work.

Mr. Mason: My understanding is that the committee be given full power to act in the framing of that bill as outlined in this report.

Mr. Miller withdraws from the committee.

Mr. Miller: I am inclined to think this bill has in it a great deal that we need, but I do not want to burden the people of Yamhill County until I know how they feel about it. I would be satisfied with that committee and to accept the decisions of that committee, but I am not satisfied to say that they would.

Mr. Bateham: All the members of the committee may be in the same position.

Mr. Mason: Who do we represent?

Mr. Miller: As far as I am concerned I always try to represent the people with whom I am associated. I want to represent the real interests of the people of my neighborhood whom I am supposed to represent. Morally, I say that I do represent a large and important interest. I am president of a society that has large interests involved. This society represents more than itself. It represents the fruit interests of the State, and if it does not represent that it is no use to go before the legislature of the State.

Mr. Mason: When I am a representative delegate I am a representative of the organization that gave me that power. This is an organization of fruit growers. The fruit growers at home are depending on us to do the work for them. Let us decide here now what we are going to do. I made the motion that this committee be appointed and that this committee be given full power to draft that law because we cannot go into deliberation here today. Let us go on record right now whether we want this proposition or whether we do not want it. I am in favor of going on record now and get it settled. We are not tieing the hands of that committee except that they are to draft a bill in line with that suggested. We would not want them to draft an entirely new bill.

Mr. Miller: I do not care a rap about this thing personally. This matter has not received consideration enough from this society. A bill was framed by a few members of a self-appointed committee and then a bill was framed last Thursday and the members of this society have had no time to think about it.

Mr. Goodrich: I approved of this resolution under a misapprehension. Because of the rapidity with which Mr. Mason talks it is possible I did not follow him if he stated in his resolution that this committee was to act in line with the report.

Mr. Miller: I desire to move that that part of the motion saying "In line with the recommendation of this report" be stricken out.

Mr. Mason: I second the motion to strike out the words "In line with the recommendation of this report." If we take that off will you pledge yourselves to go into a committee of nineteen and abide by the decisions of the committee?

Mr. Miller: That is what I had in mind to do.

Mr. Mason: When we go into the legislature we want to go in unanimously. I agree.

Motion to amend carried.

President: The motion now reads: "Resolved, that a committee on horticultural law, consisting of fifteen members be appointed by the president, from the largest growing sections of the State, and that to this committee be added the head of the department of horticulture of the Oregon Agricultural College and the president of the State Board of Horticulture, also that the legislation committee of the Pacific Coast Association of Nurserymen be invited to meet with the committee and that this committee have full power to act for this society."

Resolution adopted.

The committee as named under the resolution consists of the following: Jno. F. Forbis, chairman, Dilley; D. M. Lowe, Ashland; R. H. Parsons, C. E. Whisler, Medford; G. E. Sanders, The Dalles; C. A. Macrum, Mosier; A. I. Mason, G. I. Sargent, Hood River; H. B. Miller, Portland; A. C. Goodrich, Yamhill; M. McDonald, Orenco; Ray H. Roberts, Lebanon; Charles McNary, Salem; H. D. Lamb, Milton; J. O. Holt, Eugene; W. K. Newell, Gaston; C. I. Lamb, Mil- A. P. Bateham (President), Portland; F. W. Power (Secretary), Orenco.

By invitation of the president the following were added: C. O. Ramsey, LaGrande; H. M. Williamson, Portland; W. H. Lawrence, Hood River; Albert Brownell, Portland.

Mr. Miller: I have a report to make to the committee. I was appointed with Mr. McDonald and Mr. Roberts to take into consideration the question of utilizing some of the funds we get from the State for exhibits by taking a certain amount of that for an appropriation for premiums for new fruits, and the committee has come to the conclusion that it would be wise to take one-fourth of the State funds as appropriated to the Horticultural Society for the premium on new fruits.

Mr. Miller exhibited seedling apples which were grown on the hills of his place.

Mr. Bateham: Five thousand dollars was the last appropriation. It may be ten thousand next time. Suppose they were asked to give $10,000 for premiums for a larger show. $2,500 would be entirely out of line. I think it should be cut down to some more definite sum.

Mr. Forbis: I suggest that we say one-fourth of the amount, or not to exceed one thousand dollars.

Mr. Miller: Report as changed, accepted.

Prof. Lewis: (Discussion of Variety Adaptation of Apples.)—I believe that the State of Oregon has one of the finest fields in plant breeding there is in the United States. We have conditions that are adapted to great varieties of fruit, just what varieties they will be are not yet decided. In line with the possibilities of plant breeding, we have been experimenting with apple trees at the State Agricultural College. We know the exact pedigree of these apple trees. We will know from this work just how these varieties will break. The only motion that I want to make is that before a prize is awarded for any variety of fruit that that variety of fruit be tested thoroughly. Personally, I do not believe a prize should be given for a specimen of fruit that is not superior to anything we have. We should test the adaptability of what we now have and see if we cannot originate new things that will perhaps be better. I move that no award be given to a brand of apples unless they come up to the commercial rating. Motion carried.

Report of Committee on Resolutions was read by Mr. Whisler: We, your Committee on Resolutions beg leave to report, that in as much so many courtesies have been shown to us, be it Resolved, that the gratitude and thanks of this society are due to the Thompson Estate for the free use of this building and to Messrs. Scott & Munsell for the free use of their Sales Hall, which enabled us to hold this meeting in close proximity to the Great Land Show, thereby facilitating the interchange of visits and make both more successful and profitable to us all, to H. E. Dosch and Prof. C. I. Lewis for their interest and efforts in the students' competitive contest, and securing the premiums therefore. To the Portland Commercial Club for their entertainment at luncheon of the members of this society as well as the exhibitors of the Land Show, and lastly to the Portland Daily Press and the Horticultural Press of the Pacific Northwest for publishing from day to day not only the proceedings of this meeting, but many of the valuable papers which have been read.

Therefore be it further Resolved, that the thanks and gratitude for all these favors shown to us, are most heartily and courteously tendered to them:

That these resolutions be spread in full upon our minutes and a copy of same mailed to each of the parties named.

Report unanimously adopted.

Mr. Forbis moved that the action of the secretary in withdrawing funds for expenses in connection with the Lafean box bill committee be approved by the society. Seconded and carried.

Secretary read a bill submitted by a special committee providing for Shade Tree Act.

Moved that the report of the committee, together with the bill, be referred to the committee on Horticultural Law. (Carried.)

Society adjourned.

Report of Committee on Horticultural Law.

This committee held a two days' session at the Imperial Hotel of Portland on December 10 and 11, 1912. Fifteen members of the committee were present. The chairman, John F. Forbis, presided. F. W. Power acted as secretary. They prepared a bill for a law which was introduced at the 27th regular session of the Oregon Legislature by Senator Butler on February 4, 1913.

Largely owing to lateness of its introduction the bill was indefinitely postponed after having received favorable report of the Senate Committee on Horticulture.

The committee on horticultural law considered the Shade Tree bill which had been referred to them and voted to return it to the original committee as they did not believe it applicable to conditions in Oregon and out of harmony with our present horticultural law.

Prize Winners at the Pacific Northwest Land Products Show, November 18 to 22, 1912, under the auspices of the State Horticultural Society.

ARTISTIC APPLE DISPLAY.

1st Prize—Goldendale Fruit & Produce Association, Goldendale, Washington.
2nd Prize—Sealy-Dresser Company, Portland, Oregon.
3rd Prize—Montague Farm, Hood River, Oregon.
4th Prize—H. P. Ashby, Boise, Idaho.

DISTRICT AGRICULTURAL DISPLAY.

1st Prize—Ashland Commercial Club, Ashland, Oregon.
2nd Prize—Lane County, Oregon.
3rd Prize—Madras District, Madras, Oregon.
4th Prize—Goldendale Fruit & Produce Association, Goldendale, Washington.

APPLES.

TWENTY-FIVE BOX CONTEST.

ROME BEAUTY.

1st Prize—George Taylor, Meridian, Idaho.
2nd Prize—Weatherford & Monnett, Imbler, Oregon.

SPITZENBERG.

1st Prize—Sears & Porter, Hood River, Oregon.
2nd Prize—John Hakel, Hood River, Oregon.

WINESAP.

1st Prize—Carl Wodecki, The Dalles, Oregon.

YELLOW NEWTOWN.

1st Prize—Harrison F. Gleason, Hood River, Oregon.
2nd Prize—Frank Fenwick, Hood River, Oregon.

FOUR BOX CONTEST.

ARKANSAS BLACK.

1st Prize—John Breckenridge, Boise, Idaho.
2nd Prize—Sears & Porter, Hood River, Oregon.

BALDWIN.

1st Prize—Sears & Porter, Hood River, Oregon.
2nd Prize—Mrs. J. C. Porter, Hood River, Oregon.

BLACK TWIG.

1st Prize—C. L. Green, Wenatchee, Washington.

GANO.

1st Prize—W. N. Yost, Boise, Idaho.
2nd Prize—Weatherford & Monnett, Imbler, Oregon.

GRIMES' GOLDEN.

1st Prize—Chas. Biery, Wenatchee, Washington.
2nd Prize—Wm. Olsen, Husum, Washington.

JONATHAN.

1st Prize—John Breckenridge, Boise, Idaho.
2nd Prize—M. Stewart, Summerland, B. C.

McINTOSH.

1st Prize—M. Stewart, Summerland, B. C.

ORTLEY.

1st Prize—H. O. Sieverkropp, Hood River, Oregon.
2nd Prize—Lawrence & Smith, Hood River, Oregon.

RED CHEEK PIPPIN.

1st Prize—Sears & Porter, Hood River, Oregon.
2nd Prize—Julius Sandoz, The Dalles, Oregon.

ROME BEAUTY.

1st Prize—Weatherford & Monnett, Imbler, Oregon.
2nd Prize—Mrs. Roy C. Brock, Hood River, Oregon.

SPITZENBURG.

1st Prize—Mrs. W. W. Rodwell, Hood River, Oregon.
2nd Prize—H. O. Stieverkropp, Hood River, Oregon.

STAYMAN.

1st Prize—C. L. Green, Wenatchee, Washington.
2nd Prize—Balm Cove Orchard Co., Dufur, Oregon.

WHITE WINTER PEARMAIN.

1st Prize—Frank H. Arb, Lyle, Washington.
2nd Prize—W. N. Yost, Boise, Idaho.

WINESAP.

2nd Prize—W. N. Yost, Boise, Idaho.
1st Prize—Tedford Bros., Wenatchee, Washington.

WINTER BANANA.

1st Prize—C. C. Carpenter, Hood River, Oregon.
2nd Prize—R. C. Brock, Hood River, Oregon.

YELLOW NEWTOWN.

1st Prize—John Hakel, Hood River, Oregon.
2nd Prize—Lawrence & Smith, Hood River, Oregon.

ONE BOX CLASS.

ARKANSAS BLACK.

1st Prize—W. N. Yost, Boise, Idaho.
2nd Prize—John Breckenridge, Boise, Idaho.

BALDWIN.

1st Prize—Nelson & Anislie, Hood River, Oregon.
2nd Prize—Chas. W. Reed, Hood River, Oregon.

BEN DAVIS.

1st Prize—D. Geckler, Boise, Idaho.
2nd Prize—Lawrence & Smith, Hood River, Oregon.

BLACK BEN.

1st Prize—Tedford Bros., Wenatchee, Washington.

BLACK TWIG.

1st Prize—Lawrence & Smith, Hood River, Oregon.
2nd Prize—Tedford Bros., Wenatchee, Washington.

DELICIOUS.

1st Prize—Wm. Olsen, Husum, Washington.

GANO.

1st Prize—M. Stewart, Summerland, B. C.
2nd Prize—Lawrence & Smith, Hood River, Oregon.

GRAVENSTEIN.

1st Prize—J. W. Staats, White Salmon, Washington.
2nd Prize—Winferd M. Pierson, Appleton, Washington.

GRIMES' GOLDEN.

1st Prize—Chas. Biery, Wenatchee, Washington.
2nd Prize—Hunters Hill Orchard Co., Husum, Washington.

HYDE'S KING.

1st Prize—Lawrence & Smith, Hood River, Oregon.
2nd Prize—Sears & Porter, Hood River, Oregon.

JONATHAN.

1st Prize—John Breckenridge, Boise, Idaho.
2nd Prize—W. N. Yost, Boise, Idaho.

KING TOMPKINS.

1st Prize—Sears & Porter, Hood River, Oregon.
2nd Prize—Mrs. J. C. Porter, Hood River, Oregon.

McINTOSH RED.

1st Prize—Sears & Porter, Hood River, Oregon.
2nd Prize—M. Stewart, Summerland, B. C.

MISSOURI PIPPIN.

1st Prize—A. E. Knowles, Wenatchee, Washington.

NORTHERN SPY.

1st Prize—M. Stewart, Summerland, B. C.
2nd Prize—C. J. Tidcombe, Scappoose, Oregon.

ORTLEY.

1st Prize—Lawrence & Smith, Hood River, Oregon.
2nd Prize—Mrs. W. W. Rodwell, Hood River, Oregon.

RED CHEEK PIPPIN.

1st Prize—Julius Sandoz, The Dalles, Oregon.
2nd Prize—Nelson & Anislie, Hood River, Oregon.

ROME BEAUTY.

1st Prize—Weatherford & Monnett, Imbler, Oregon.
2nd Prize—W. N. Yost, Boise, Idaho.

SPITZENBERG.

1st Prize—M. Stewart, Summerland, B. C.
2nd Prize—Chas. W. Reed, Hood River, Oregon.

VANDERPOOL RED.

1st Prize—H. G. Rumbaugh, Albany, Oregon.

WAGENER.

1st Prize—H. O. Stieverkropp, Hood River, Oregon.
2nd Prize—John Hakel, Hood River, Oregon.

WEALTHY.

1st Prize—M. Stewart, Summerland, B. C.

WHITE WINTER PEARMAIN.

1st Prize—M. Stewart, Summerland, B. C.
2nd Prize—Tedford Bros., Wenatchee, Washington.

WINESAP.

1st Prize—W. N. Yost, Boise, Idaho.
2nd Prize—H. P. Ashby, Boise, Idaho.

WINTER BANANA.

1st Prize—Alex McKay, Summerland, B. C.
2nd Prize—C. C. Carpenter, Hood River, Oregon.

YELLOW BELLFLOWER.

1st Prize—Julius Sandoz, The Dalles, Oregon.
2nd Prize—Burrell Investment Co., Colfax, Washington.

YELLOW NEWTOWN.

1st Prize—W. N. Yost, Boise, Idaho.
2nd Prize—John Hakel, Hood River, Oregon.

BIG APPLES.

PYRAMID OF 30—WEIGHT TO GOVERN.

1st Prize—W. H. Hay, Montesano, Washington.
2nd Prize—Montague Farm, Hood River, Oregon.
3rd Prize—B. Leis, Beaverton, Washington.

SINGLE BIGGEST APPLE—CIRCUMFERENCE TO GOVERN.

1st Prize—A. F. Clapper, Salem, Oregon.

POTATOES.

1st Prize—Asahel Smith, Ladner, B. C.
2nd Prize—Culver Development League, Culver, Oregon.
3rd Prize—A. V. Underwood, Dufur, Oregon.

PEARS.

THREE BOX CONTEST.

ANJOU.

1st Prize—Carl Wodecki, The Dalles, Oregon.

CLAIRGEAU.

1st Prize—N. E. Gale, Meslier, Oregon.

COMICE.

1st Prize—J. L. Tracy, Medford, Oregon.

P. BARRY.

1st Prize—A. Holliday, Scappoose, Oregon.

WINTER NELIS.

1st Prize—Montague Farm, Hood River, Oregon.
2nd Prize—Carl Wodecki, The Dalles, Oregon.

ONE BOX CONTEST.

ANJOU.

1st Prize—G. E. Marshall, Medford, Oregon.
2nd Prize—Carl Wodecki, The Dalles, Oregon.

BUERRE EASTER.

1st Prize—Carl Wodecki, The Dalles, Oregon.

BOSC.

1st Prize—William Brayton, Central Point, Oregon.

CLAIRGEAU.

1st Prize—N. E. Gale, Mesleir, Oregon.
2nd Prize—J. D. Eaton, Vancouver, Washington.

COMICE.

1st Prize—Carl Wodecki, The Dalles, Oregon.
2nd Prize—J. L. Tracy, Medford, Oregon.

P. BARRY.

1st Prize—A. Holliday, Scappoose, Oregon.

WINTER NELIS.

1st Prize—Carl Wodecki, The Dalles, Oregon.
2nd Prize—Montague Farm, Hood River, Oregon.

SINGLE PLATES.

ANJOU.

1st Prize—G. E. Marshall, Medford, Oregon.
2nd Prize—Carl Wodecki, The Dalles, Oregon.

BEURRE EASTER.

1st Prize—H. Bingham, Medford, Oregon.
2nd Prize—Carl Wodecki, The Dalles, Oregon.

BOSC.

1st Prize—Wm. Brrayton, Central Point, Oregon.

COMICE.

1st Prize—J. L. Tracy, Medford, Oregon.
1st Prize—Carl Wodecki, The Dalles, Oregon.

IDAHO.

1st Prize—F. A. Gregory, Portland, Oregon.

P. BARRY.

1st Prize—H. Bingham, Medford, Oregon.
2nd Prize—A. Holliday, Scappoose, Oregon.

SECKEL.

1st Prize—G. O. Vannatla, Ashland, Oregon.

WINTER NELIS.

1st Prize—G. B. Dean, Medford, Oregon.
2nd Prize—Fred Hopkins, Central Point, Oregon.

WORDEN SECKEL.

1st Prize—H. Bingham, Medford, Oregon.

FIVE OR MORE PLATE DISPLAY.

1st Prize—H. Bingham, Medford, Oregon.
2nd Prize—J. E. Butler, Lewiston, Idaho.

NUTS.

COLLECTIVE EXHIBIT.

1st Prize—Ferd Groner, Hillsboro, Oregon.
2nd Prize—J. E. Butler, Lewiston, Idaho.

FRANQUETTE WALNUT—SINGLE DISHES.

1st Prize—Ferd Groner, Hillsboro, Oregon.

PARISIENNE WALNUT.

1st Prize—Prineville District, Prineville, Oregon.

THRESHED GRAIN AND HOPS.

WHEAT—SPRING AND WINTER.

1st Prize—Prineville District, Prineville, Oregon.
2nd Prize—Culver Development League, Culver, Oregon.

BARLEY.

1st Prize—Culver Development League, Culver, Oregon.
2nd Prize—Prineville District, Prineville, Oregon.

OATS.

1st Prize—C. D. Nairn, Amity, Oregon.
2nd Prize—Prineville District, Prineville, Oregon.

RYE.

1st Prize—Prineville District, Prineville, Oregon.

DRIED FRUITS.

ITALIAN PRUNES.

1st Prize—B. Leis, Beaverton, Washington.
2nd Prize—Mason Ehrman & Co., Portland, Oregon.

PETITE PRUNES.

1st Prize—Mason Ehrman & Co., Portland, Oregon.

APPLES.

1st Prize—Mason Ehrman & Co., Portland, Oregon.

PEARS.

1st Prize—Mason Ehrman & Co., Portland, Oregon.

APRICOTS.

1st Prize—Mason Ehrman & Co., Portland, Oregon.

PEACHES.

1st Prize—Mason Ehrman & Co., Portland, Oregon.

BLACK RASPBERRIES.

1st Prize—Mason Ehrman & Co., Portland, Oregon.

APPLES.

1st Prize—Mrs. Jessie C. Vercler, Salem, Oregon.
2nd Prize—Mason Ehrman & Co., Portland, Oregon.

PEARS.

1st Prize—Mason Ehrman & Co., Portland, Oregon.
2nd Prize—Mrs. Jessie C. Vercler, Salem, Oregon.

APRICOTS.

1st Prize—Mason Ehrman & Co., Portland, Oregon.

PEACHES.

1st Prize—Mason Ehrman & Co., Portland, Oregon.
2nd Prize—Mrs. Jessie C. Vercler, Salem, Orgeon.

ITALIAN PRUNES—20-30.

1st Prize—Mason Ehrman & Co., Portland, Oregon.
2nd Prize—Henry D. Townsend, Salem, Oregon.

ITALIAN PRUNES—30-40.

1st Prize—L. T. Reynolds, Salem, Oregon.
2nd Prize—B. Leis, Beaverton, Washington.

ITALIAN PRUNES—40-50.

1st Prize—B. Leis, Beaverton, Washington.
2nd Prize—Mrs. Jessie C. Vercler, Salem, Oregon.

JELLIES—PRESERVES.

FRUIT JELLY.

1st Prize—Mrs. Robert Warner, Oregon City, Oregon.
2nd Prize—Mrs. W. W. Rodwell, Hood River, Oregon.
3rd —Hood River High School, Hood River, Oregon.

HOME CANNED FRUIT.

1st Prize—D. H. Thorn, Hood River, Oregon.
2nd Prize—Mrs. W. W. Rodwell, Hood River, Oregon.
3rd Prize—Mrs. J. K. Carper, Promise, Oregon.

HOMEMADE JAM OR MARMALADE.

1st Prize—Mrs. Jessie C. Vercler, Salem, Oregon.

APPLE BUTTER—COMMERCIAL OR HOMEMADE.

1st Prize—Mrs. W. W. Rodwell, Hood River, Oregon.
2nd Prize—Mrs. W. H. Lawrence, Hood River, Oregon.
3rd Prize—Mrs. J. K. Carper, Promise, Oregon.

LORD'S OREGON LAWS.

Introduced by Mr. Carter and read first time January 27, 1909.

Section 5492. That there be and hereby is appropriated out of any money in the State Treasury, not otherwise appropriated, the sum of $1,000.00 for the fiscal years 1909 and 1910, or so much thereof as is necessary to pay for the printing of the proceedings, programs, public notices and the premiums of the State Horticultural Society, and further to provide the necessary stationery and postage for the use of the officers in the legitimate conduct of the society's affairs.

Section 5493. It shall be the duty of the Secretary of State to draw his warrant upon the State Treasurer, in favor of the treasurer of the State Horticultural Society, upon the receipt of vouchers properly certified by the board of trustees of said State Horticultural Society, providing the treasurer and board of trustees of said society are under a safe and sufficient bond for the faithful discharge of their duties, in a sum equal to twice the amount of the sum appropriated by this act; and provided further, that the board of trustees of said society shall be appointed by the Governor from a list of bona fide members of said society.

Section 5494. It shall be the duty of the secretary of the State Horticultural Society to submit to the Governor, on or before thirty days from the date at which this act takes effect, the names of at least seven members in good standing, who shall have been duly nominated at a regular or special meeting of the society, all members of the same having been duly notified of such meeting.

From this list the Governor shall select three to act as trustees, one of whom shall serve for a period of three years from the date of the annual meeting of 1908, one for two years, and one for one year from the same date. Thereafter appointments shall be made for a term of three years, from which the Governor shall select one, upon being notified of the nomination by the secretary.

FRUIT GROWERS ASSOCIATIONS OF OREGON.

Albany Fruit Growers Union, Albany.
Ashland Fruit & Produce Association, Ashland.
Benton County Fruit Growers Association, Corvallis.
Brownsville Fruit & Produce Association, Brownsville.
Central Horticultural Society, Coquille.
Coos Bay Fruit Growers Association, Marshfield.
Coquille Valley Fruit Growers Union, Myrtle Point.
Cove Fruit Growers Association, Cove.
Creswell Fruit & Vegetable Growers Association, Creswell.
Dallas Fruit Growers Association, Dallas.
Douglas County Fruit Growers Association, Roseburg.
Dufur Valley Fruit Growers Union, Dufur.
Dundee Fruit Growers Association, Dundee.
Estacada Fruit Growers Association, Estacada.
Eugene Fruit Growers Association, Eugene.
Grand Ronde Valley Fruit Growers Union, Union.
Grants Pass Fruit Association, Grants Pass.
Hyland Fruit Grower of Yamhill County, Sheridan.
Imbler Fruit Growers Union, Imbler.
LaGrande Fruit Association, LaGrande.
Fruit Growers Mutual Association, LaGrande.
Lincoln County Fruit Growers Union, Toledo.
McMinnville Fruit Growers Association, McMinnville.
Milton Fruit Growers Union, Milton.
Mosier Fruit Growers Association, Mosier.
Mount Hood Fruit Growers Association, Sandy.
Myrtle Piont Horticultural Society, Myrtle Point.
Newberg Apple Growers Association, Newberg.
Northeast Gaston Farmers Association, Forest Grove.
Northwestern Fruit Exchange, Portland.
Oregon City Fruit & Produce Association, Oregon City.
Rogue River Fruit & Produce Association, Medford.
Salem Fruit Union, Salem.
Sanitiam Fruit Growers Association, Lebanon.
Springbrook Fruit Growers Union, Springbrook.
Stanfield Fruit Growers Association, Stanfield.
Sutherlin Fruit Growers Association, Sutherlin.
The Dalles Fruit Growers Union, The Dalles.
Umpqua Valley Fruit Growers Association, Myrtle Creek.
Farmer's Union Exchange, Union.
Willlamette Valley Prune Association, Salem.
Washington County Fruit Growers Association, Hillsboro.

Those desiring to secure any Bulletin or circular issued by the various Agricultural Colleges will find the correct address below as furnished by A. C. True, director of Experiment Stations, Washington, D. C.

ADDRESS LIST OF AGRICULTURAL AND MECHANICAL COLLEGES IN THE UNITED STATES.

July 15, 1913.

This list includes all institutions receiving the benefits of the acts of Congress of July 2, 1862, and August 30, 1890. Those marked with an asterisk (*) do not maintain courses of instruction in agriculture.

Alabama Polytechnic Institute, C. C. Thach, Auburn, Alabama.
Agricultural School of the Tuskegee, B. T. Washington, Tuskegee Inst,, Ala.
Agricultural and Mechanical College for Negroes, W. S. Buchanan, Normal, Ala.
University of Arizona, Arthur H. Wilde, Tuscon, Ariz.
College of Agriculture of the University of Arkansas, C. F. Adams, Fayetteville, Ark.
Branch Normal College, F. T. Venegar, Pine Bluff, Ark.
College of Agriculture of the University of California, E. J. Wickson, Berkeley, Calif.
The State Agricultural College of Colorado, C. A. Lory, Fort Collins, Col.
Connecticut Agricultural College, C. L. Beach, Storrs, Conn.
Delaware College, G. A. Harter, Newark, Del.
State College for Colored Students, W. C. Jason, Dover, Del.
College of Agriculture of the University of Florida, J. J. Vernon, Gainesville, Fla.

Florida Agricultural and Mechanical College for Negroes, N. B. Young, Tallahassee, Fla.
Georgia State College of Agriculture, A. M. Soule, Athens, Ga.
Georgia State Industrial College, R. R. Wright, Savannah, Ga.
College of Hawaii, J. W. Gilmore, Honolulu, Hawaii.
College of Agriculture of the University of Idaho, W. L. Carlyle, Moscow, Idaho.
College of Agriculture of the University of Illinois, E. Davenport, Urbana, Ill.
School of Agriculture of Purdue University, J. H. Skinner, La Fayette, Ind.
Iowa Ctate College of Agriculture and Mechanic Arts, R. A .Pearson, Ames, Ia.
Kansas State Agricultural College, H. J. Waters, Manhattan, Kan.
The College of Agriculture of the State University, M. A. Scovell, Lexington, Ky.
The Kentucky Normal and Industrial Institute for Colored Persons, J. S. Hathaway, Frankfort, Ky.
Louisiana State University and Agricultural and Mechanical College, T. D. Boyd, Baton Rouge, La.
Southern University and Agricultural and Mechanical College, H. A. Hill, New Orleans, La.
College of Agriculture of the University of Maine, R. J. Aley, Orono, Me.
Maryland Agricultural College, R. W. Silvester, College Park, Md.
Princess Anne Academy, Eastern Branch of the Maryland Agricultural College, T. H. Kiah, Princess Anne, Md.
Massachusetts Agricultural College, K. L. Butterfield, Amherst, Mass.
Massachusetts Institute of Technology, R. C. Maclaurin, Boston, Mass.
Michigan Agricultural College, J. L. Snyder, East Lansing, Mich.
College of Agricultural of the University of Minnesota, A. F. Woods, University Farm, St. Paul, Minn.
Mississippi Agricultural and Mechanical College, G. R. Hightower, Agricultural College, Miss.
Alcorn Agricultural and Mechanical College, J. A. Martin, Alcorn.
College of Agriculture of the University of Missouri, F. B. Mumford, Columbia, Mo.
School of Mines and Metallurgy of the University of Missouri, L. E. Young, Rolla, Mo.
Lincoln Institute, B. F. Allen, Jefferson City, Mo.
Montana Agricultural College, Jas. M. Hamilton, Bozeman, Mont.
College of Agriculture of the University of Nebraska, E. A. Burnett, Lincoln, Neb.
College of Agriculture of the University of Nevada, J. E. Stubbs, Reno, Nev.
New Hampshire College of Agriculture and Mechanic Arts, W. D. Gibbs, Durham, N. H.
Rutgers Scientific School (The New Jersey State College for the Benefit of Agriculture and the Mechanic Arts), W. H. S. Demarest, N. J .
New Mexico College of Agriculture and Mechanic Arts, W. E. Garrison, State College, N. M.
New York State College of Agriculture, L. H. Bailey, Ithaca, N. Y.
The North Carolina College of Agriculture and Mechanic Arts, D. H. Hill, West Raleigh, N. C.
The Agricultural and Mechanical College for the Colored Race, J. B. Dudley, Greensboro, N. C.
North Dakota Agricultural College, J. H. Worst, Agricultural College, N. D.
College of Agriculture of Ohio State University, H. C. Price, Columbus, Ohio.
Oklahoma Agricultural and Mechanical College, J. H. Connell, Stillwater, Okla.
Agricutura and Normal University, I. E. Page, Langston, Okla.
Oregon State Agricultural College, W. J. Kerr, Corvallis, Ore.
The Pennsylvania State College, Edwin E. Sparks, State College, Pa.
Rhode Island State College, Howard Edwards, Kingston, R. I.
The Clemson Agricultural College of South Carolina, W. M. Riggs, Clemson College, S. C.
The Colored Normal, Industrial, Agricultural, and Mechanical College of South Carolina, R. S. Wilkinson, Orangeburg, S. C.
South Dakota State College of Agriculture and Mechanic Arts, Robert L. Slagle, Brookings, S. D.
College of Agriculture, University of Tennessee, Brown Ayres, Knoxville, Tenn.
Agricultural and Mechanical College of Texas, R. T. Milner, College Station, Texas.
Prairie View State Normal and Industrial College, E. L. Blackshear, Prairie View, Texas.
The Agricultural College of Utah, J. A. Widtsoe, Logan, Utah.
College of Agriculture of the University of Vermont, J. L. Hills, Burlington, Vt.
The Virginia Agricultural and Mechanical College and Polytechnic Institute, P. B. Barringer, Blacksburg, Va.
The Hampton Normal and Agricultural Institute, H. B. Frissell, Hampton, Va.
State College of Washington, E. A. Bryan, Pullman, Wash.
College of Agriculture of West Virginia University, E. D. Sanderson, Morgantown, W. Va.
The West Virginia Colored Institute, Byrd Prillerman, Institute, W. Va.
College of Agriculture of the University of Wisconsin, H. L. Russell, Madison, Wis.
College of Agriculture and Mechanic Arts, University of Wyoming, C. A. Duniway, Laramie, Wyo.

STATE HORTICULTURAL SOCIETIES.

The following list was corrected to summer of 1912. Nearly every secretary responding and giving correct address. If you note any changes or omissions please advise Frank W. Power, secretary, Orenco, Oregon.

Reports from nearly all societies can be obtained on payment of $1.00 per annum as dues.

In states which have no horticultural society the address of the secretary of the State Board of Horticulture is given.

Alabama State Horticultural Society, P. F. Williams, Auburn, Ala. (Have State Board but it only reports on inspection.)
Alaska Horticultural Society, C. C. Georgeson, Sitka, Alaska.
Arkansas State Horticultural Society, Prof Ernest Walker, Fayetteville, Ark. (No board, has Bureau of Agriculture, Clay Sloan, Little Rock, Ark.)
Arizona Horticultural Commission, R. H. Forbes, Tuscon, Ariz. (No board.)
Arizona Horticultural Society, Tuscon, Ariz. (No board.)
California State Commission of Horticulture, A. J. Cook, Commissioner, Sacramento, Cal., E. O. Essig, Secretary.
California Horticultural Society, H. H. Lilenthal, San Francisco, Cal.
Colorado State Horticultural Society, Martha A. Shute, Denver, Col.
Colorado State Board of Horticulture, Martha A. Shute, Denver, Col. (Includes Society report.)
Connecticut State Pomological Society, H. C. C. Miles, Milford, Conn.
Delaware Peninsular Horticultural Society, Wesley Webb., Dover, Del.
Florida State Horticultural Society, E. O. Painter, Jacksonville, Fla.
Georgia State Horticultural Society, T. H. McHatton, Athens, Ga.
Georgia State Board Entomoligy, E. L. Worsham, Entom., Atlanta, Ga.
Illinois State Horticultural Society, W. B. Lloyd, Kinmundy, Ill.
Idaho State Horticultural Society, W. N. Yost, Meriden.
Indiana State Horticultural Society, R. M. Hazlett, treasurer, Green Castle, Ind.
Iowa State Horticultural Society, Wesley Green, Des Moines, Iowa.
Northwestern Iowa Horticultural Society, W. B. Chapman, Correctionville, Ia.
Northeastern Iowa Horticultural Society, Chas. F. Gardner, Osage, Ia.
Southeastern Iowa Horticultural Society, W. T. Richey, Albia, Ia.
Southwestern Iowa Horticultural Society, Geo. H. Van Houten, Lenox, Ia. (Reports of all Iowa societies bound in one volume.)
Kansas State Horticultural Society, Walter Wellhouse, Topeka, Kan.
Kentucky State Horticultural Society, W. R. Button, Bedford, Ky.
Louisiana State Horticultural Society, F. H. Burnett, Baton Rogue, La.
Maine State Horticultural Society, E. L. White, Bowdoinham, Me.
Maryland State Horticultural Society, T. B. Symonds, College Park, Md.
Massachusetts State Horticultural Society, Wm. P. Rich, 300 Mass. Ave., Boston, Mass.
Massachusetts Fruit Growers Ass'n, F. H. Brown, Marlboro, Mass.
Michigan State Horticultural Society, Chas. F. Bassett, Fennville, Mich.
Grand Rapids Fruit Growers Ass'n, Wm. Malloy, Grand Rapids, Mich.
Minnesota State Horticultural Society, A. W. Latham, Minneapolis, Minn.
Mississippi State Horticultural Society, Pro. A. B. McKay, Agricultural College, Miss.
Missouri State Board of Horticulture, Ashleigh P. Boles, Columbia, Mo.
Missouri Valley Horticultural Society, A. V. Wilson, Munice, Ill.
Montana State Horticultural Society, M. L. Dean, Missoula, Mont.
Nebraska State Horticultural Society, C. G. Marshall, Lincoln.
New Hampshire State Horticultural Society, B. S. Pickett, Durham, N. H.
New Jersey State Horticultural Society, Howard G. Taylor, Riverton, N. J.
New Mexico State Horticultural Society, J. D. Sena, Santa Fee, N. M.
Western New Work Horticultural Society (no board), John Hall, 204 Grant Bldg., Rochester, N. Y.
N. Y. State Fruit Growers Ass'n, E. C. Gillette, Pen Yam, N. Y. (No board.)
N. Y. State Board of Agriculture, A. E. Brown, Batavia, N. Y.
North Carolina State Horticultural Society, W. N. Hutt, West Raleigh, N. C.
North Dakota State Horticultural Society, C. A. Chinberg, Hankinson, N. D. (Use the Minnesota reports.)
Ohio State Horticultural Sosiety, F. H. Ballou, Newark, Ohio.
Oklahoma State Horticultural Society. (Defunct per former Secretary J. B. Thoburn, Oklahoma City.
Oregon State Horticultural Society, Frank N. Power, Orenco, Ore.
Oregon State Board of Horticulture, H. M. Williamson, Portland, Ore.
Pennsylvania State Horticultural Society, C. J. Tyson, Floradale, Pa.
Adams County Horticultural Society, Edwin C. Tyson, Floradale, Pa.
Rhode Island State Horticultural Society, Arthur C. Miller, Providence, R. I.
Rhode Island State Board of Agriculture, Jno. J. Dunn, Providence, R. I.
South Dakota State Horticultural Society, Prof. N. E. Hansen, Brookings, S. D.
Tennessee State Horticultural Society, Prof. Chas. A. Keffer, Knoxville, Tenn.

Tennessee Commissioner of Agriculture, T. F. Peck, Nashville, Tenn.
Texas State Horticultural Society, Prof. E. J. Kyle, College Station, Texas.
(Proceedings publisher with Farmers Congress.)
Texas Commission of Agriculture, E. R. Kone, Commissioner, Austin, Texas.
(Proceedings contoin report of Horticulture Society, Farmers Congress, Nurserymen's Association, Citrus Association, etc.)
Utah State Board of Horticulture, Edwd. J. Taylor, Salt Lake City, Utah.
Utah State Horticultural Society, Edwd. J. Taylor, Salt Lake, Utah.
Vermont State Horticultural Society, M. B. Cummings, Burlington, Vt.
Virginia State Horticultural Society (no board), Walter Whately, Crozet, Va.
Washington State Horticultural Society, L. M. Brown, Walla Walla, Wash.
Western Washington Horticultural Society, J. W. Clark, Bellingham, Wash.
West Virginia State Horticultural Society, A. L. Dacy, Morgantown, W. Va.
(Report contained in report of Board of Agriculture.)
West Virginia State Board of Agriculture, A. L. Dacy, Morgantown, W. Va.
Wisconsin State Horticultural Society, Frederic Cranefield, Madison, Wis.
Wyoming State Board of Horticulture, Aven Nelson, Laramie, Wyo.

HORTICULTURAL ORGANIZATIONS.

American Apple Growers Congress, Clinton Oliver, Denver, Colo.
American Ass'n of Nurserymen, John Hall, 2.4 Granite Blk., Rochester, N. Y.
American Cranberry Growers Sss'n, A. J. Rider, Hammonton, N. J.
American Federation of Horticultural Societies, Chas. E. Bassett, Fenville, Mich.
American Pomological Society, E. R. Lake, Washington, D. C.
California Ass'n of Nurserymen, H. W. Kruckeberg, Los Angeles, Cal.
Eastern Fruit Growers Ass'n, Nat T. Frame, Martinsburg, W. Va.
Eastern Nurserymen's Ass'n, Wm. Pitkin, Rochester, N. Y.
Idaho Ass'n of Nurserymen, J. F. Littooy, Boise, Idaho.
International Apple Shippers Ass'n, C. P. Rothwell, Martinsburg, W. Va.
Mississippi Valley Apple Growers Ass'n, Jas. Handley, Quincy, Ill.
National Horticultural Congress, Freeman L. Reed, Council Bluffs, Iowa.
National Nut Growers Association, J. F. Wilson, Waycross, Ga.
Northern Nut Growers Ass'n, Dr. W. C. Deming, Westchester, N. Y.
Pacific Coast Ass'n of Nurserymen, C. A. Tonneson, Tacoma, Wash.
Society of Horticultural Science, C. P. Close, Washington, D. C.
Western Ass'n of Nurserymen, E. J. Holman, Leavenworth, Kan.
Western Fruit Jobbers Ass'n, E. B. Branch, Omaha, Neb.

FOREIGN SOCIETIES.

British Columbia Fruit Growers Ass'n, R. M. Winslow, Vernon, B. C., Box 968.
British Columbia Nurserymen's Ass'n, R. Layritz, Victoria, B. C.
Canadian Horticultural Ass'n, Julius Luck, Cote des Neiges, Quebec.
Department of Agriculture, C. C. Johnson, Toronto, Ontario.
Minister of Agriculture, Martin Burrell, Ottawa, Ontario.
Department of Agriculture, Wm. J. Bonavia, Secretary, Victoria, B. C.
Western Horticultural Society, F. W. Brodrick, Winipeg (Agricultural College, Manitoba, B. C.
Royal Horticultural Society, Rev. W. Wilkes, Vincent Sq., Westminister, Eng.
Ontario Fruit Growers Ass'n, P. W. Hodgetts, Toronto, Ontario.

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UNIVERSITY OF MICHIGAN
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